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GSCA 2015 Conference Coverage Concluded

*Our coverage of the **Giant Screen Cinema Association**'s 2015 Conference and Trade Show in San Francisco in September concludes with this report.*

IMAX laser projection system

Two **Imax Corporation** staffers described the capabilities of the new IMAX laser projection system that had just been installed in the host theater, the **AMC Metreon IMAX**. VP **Mike Lutz**, in a brief presentation near the start of the conference, and EVP **David Keighley** during the Technical Session.

Lutz explained that, because of delays in obtaining city permits, the theater had not been able to install the new IMAX 12-channel sound system in time for the meeting. Sound tracks were played through the existing 6-channel IMAX system.

Lutz quoted sound designer **Karl Mohr**, whose GS credits include ***Jerusalem***, ***Flight of the Butterflies***, and ***Under the Sea***, as saying that the 12-channel system was a "next-level sonic revelation" and that its placement of four speakers on the ceiling and two on the side walls, in addition to the six in the standard IMAX system, provide "an explosion of dimensionality" for sound designers to use.

In the Technical Session, Keighley lauded film as a capture, presentation, and archival medium, saying that it was important to remember the legacy of film and keep it alive as long as possible. It is particularly important in archiving, he said, pointing out that film images will remain stable for decades, and that it is 11 times more expensive to archive GS footage digitally than on film.

(The following four paragraphs include details from the talks by Lutz and Keighley.)

The 4K laser projectors, built in cooperation with **Barco**, were designed from the ground up at an R&D cost of $60 million, using patents acquired from **Kodak**. The system uses six primary colors, two slightly different sets of red, green, and blue — one set in each projector — and color separation glasses that separate the images for each eye. Because the lasers produce light at the precise frequencies needed, no filters are needed at the projector, increasing the amount of light that gets to the viewer.

One of the key design elements of the IMAX laser projector, which no other digital projector has, is the open box on which the digital micro-mirror device (DMD) imaging chips are mounted. All other digital projectors mount the DMDs on a prism which combines their light before it goes out through the lens. The prism can cause fringing that blurs colors and lowers resolution, and makes cooling the chips more difficult. Temperature changes can also cause misalignment of

*(see **GSCA** on page 6)*

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Immersive Cinema

by Michael Goldman

One of the less well-defined concepts percolating through the media industry right now is the notion of the so-called multi-screen or multi-view environment. The term can potentially be applied in different directions, depending on whether one is discussing home viewing environments, cinematic environments, or virtual environments, and whether one is discussing the use of multiple devices to view and digest content or supplement primary content with secondary content, or the use of multiple screens to create a single image for an immersive viewing experience in a cinematic setting.

Indeed, **Peter Ludé**, senior vice president at **Real D**, former president of the **Society of Motion Picture and Television Engineers**, and former chairman of the **Laser Illuminated Projector Association**, suggests a better term than "multiscreen environments" might simply be "immersive environments," and in that context, cinematic settings are an exciting, new area.

"Today, there is a lot of talk about immersive cinema," Ludé explains. "Content creators are now considering how a theatrical cinema might work with, or compete with, virtual reality or augmented reality technology."

In terms of historical context, Ludé points out that the pursuit of immersive

*(see **IMMERSIVE** on page 14)*

Premiering This Month

Space Next 3D
In the Heart of the Sea
Star Wars: The Force Awakens
Wild Africa

See page 11.

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Motion Vs. Resolution In GS Productions

by Pete Routhier

Routhier wrote this article for LF Examiner *to summarize his presentation at the GSCA's fall conference in San Francisco, "Motion Versus Resolution in Giant Screen Productions."*

Physiologically, the human visual system is not very good at resolving detail in motion. A simple exercise I use to illustrate this point with students is to ask them to move their head quickly from left to right and back. Are they able to see anything between the beginning and the end of the move? No. It's all a blurry mess, which our brain ignores.

This relative weakness of our visual system to perceive rapid motion allows filmmakers to tell compelling stories using only 24 frames per second.

To make this frame rate watchable, cinematographers quickly discovered that frame rate and shutter speed, or exposure time, are intimately linked. Using a fast shutter, which makes every frame crisp and clear, goes beyond what our eyes can resolve, and makes the moving images unnatural and painful to watch.

Historically, the solution has been to lower the shutter speed to one-half of the exposure time. So for conventional 24 fps cinema, the shutter is open for 1/48 of a second. When desired for effect, both frame rate and shutter speed can be varied, but for the vast majority of shots, the 24/48 ratio is applied today, just as it was when the foundations of modern cinematography were established.

With the recent dramatic advances in digital filmmaking, cinematographers are bombarded with an almost unlimited number of options when it's time to choose a camera package. New models appear every year, promising better performance, and rapidly transforming the hottest "must have" cameras of the previous year into obsolete models that no one wants to use anymore.

When manufacturers present new cameras, one of the major selling points is their increase in spatial resolution. In just a few years we went from HD to 2K then 4K, 5K, 6K, and 8K. Few remember that ***Star Wars Episode II*** (2002), which I saw during its initial run in an IMAX theater, was shot using the **Sony** F950 at a resolution of only 1920 x 1080!

While spatial resolution has progressed by leaps and bounds, outside of a few attempts (like **Peter Jackson**'s controversial move to 48 fps for ***The Hobbit*** trilogy), temporal resolution remains at 24 fps to this day.

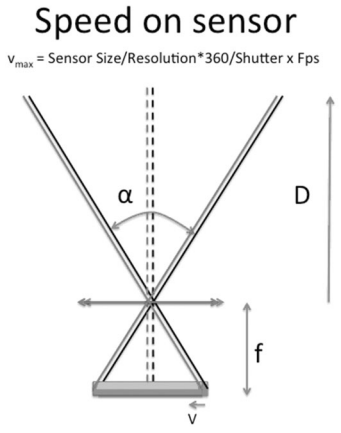
The question then becomes, is there a real benefit in increasing spatial resolution when temporal resolution remains static? As is so often the case, the answer is... it depends.

The major limitation in taking advantage of higher spatial resolutions is a well-known phenomenon called motion blur. A camera captures a certain amount of light for a certain amount of time. When, due to motion (from the source, the camera, or a combination of both), a single point of light is captured on more than a single pixel during exposure time, that point loses its clarity. It also acquires a certain level of transparency, because it coexists partially with other points of light at the same pixel. Its level of detail is now inferior to the capture device's capability. In short, the image appears blurry.

The recent dramatic increase in camera resolution, while maintaining the same frame rate and exposure time, has made it incredibly difficult to capture detail at the newer cameras' native resolution, unless the cameras and the scenes are all practically immobile.

Let's look at the math: a **Red** Dragon 6K full-frame camera packs 6144 pixels horizontally on a sensor that is 1.209 inches (3.07 centimeters) wide. That means that the width of a photosite on the sensor is only 0.000197 inches (0.004998 millimeters).

Let's now take a simple example: We have a fixed camera filming someone walking from left to right across the frame. How slow must that walk be to maintain detail on the walker?



The translation speed must be slower than the speed at which any given point would be captured by two or more adjacent pixels on the sensor during

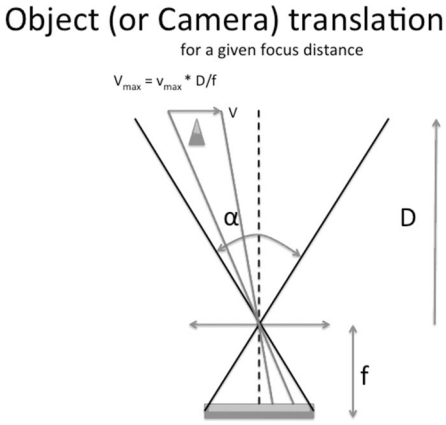
the exposure of the frame.

First, let's define the maximum allowable speed on the sensor. Speed being displacement divided by time, the maximum velocity (Vmax) equals the width of a pixel (sensor size divided by resolution), divided by exposure time (or if using degrees, 360 divided by shutter degree multiplied by frame rate).

In the case of the Dragon, that gives us:

Vmax = (1.209 inch wide sensor / 6144 pixels) / (1/48s) = 0.0094 inches per second.

Using basic algebra, the ratio of the walker's speed at a distance D from the camera to the walker's speed on the sensor at focal distance f is going to be:



So for a walker 30 feet (9 meters) from the camera, captured on a 28mm lens, the max speed would be:

Vmax = 0.0094 in/s * 30 feet / 28mm.

Converting this into coherent units, we get a result of 0.2 miles per hour (0.32 kilometers per hour). Even if we downscale the final resolution to 4096, that would give us a result of 0.3 mph (0.48 kph), not a significant improvement. As a human normally walks around 3 mph (4.8 kph), this shows us that very little motion is allowed if we want to take advantage of superior spatial resolutions. Tracking a vehicle, or someone running, for example, becomes a daunting task when anything on the screen that deviates from the tracking by more than 0.3 miles per hour is blurry. And that is using a best-case scenario, i.e., shooting a distant object with a wide lens.

These theoretical models have been proven in the analysis of captured images time and time again, as I have shown in previous papers contributed to the **IBC** (formerly the International Broadcasting Convention), the **Society of Motion Picture and Television Engineers**, and other industry groups. Research shows that below 120 fps, it is very difficult to take advantage of 4K. Shooting at 8K doubles that rate to 240 fps. This is quite unachievable using today's capture and projection technologies.

Pierre Routhier

Therefore, the compromises filmmakers need to make to increase spatial resolution in digital filmmaking (higher compression ratios and/or heavier data management infrastructure, heavier post-production) beyond 4K do not seem to be warranted at 24 fps. Cameras with resolutions of 6K, 8K, or higher, may be worth the trouble for stationary wide vistas, but using them for virtually any other shots with motion will be needlessly expensive. Four-K or 5K cameras are more than adequate for them, and often deliver a better image, actually, because their larger photosites provide a wider dynamic range than similar-sized sensors packing more spatial resolution.

In conclusion, the key issue filmmakers face when trying to capture compelling content with very high spatial resolutions is that currently, temporal resolution is a limiting factor. Until the industry moves to significantly higher frame rates (120 fps and above), the push to use higher and higher spatial resolutions on digital cameras will not create a noticeable difference in the quality of the images on screen for a vast majority of the shots that are not near-stationary, ultra-wide establishing shots.

In other words, the 4K container is quite large enough to capture detail at 24 fps. Going for a larger container is not a guarantee of a better image unless the frame rate is increased.

Pierre (Pete) Routhier is an advanced imaging technologies specialist with more than a decade of experience developing standards and methods to support both production and post-production of amazing video imagery. Pete's stereoscopic supervision credits include The Adventures Of Shark Boy And Lava Girl; Disney's The Lion King: South Africa 10th Anniversary; X Games: The Movie; One Direction: This Is Us; *and* Edge Of Tomorrow. *He can be reached at pierre.routhier@creat3.com.*

Corrections

In the Oct-Nov. issue, an item in the Biz section on the first German laser installation incorrectly stated the configuration of the system in Cologne's CineDome. It uses a single Barco 6P laser projector, not two.

Imax Q3 report

In its third-quarter earnings report, **Imax Corporation** posted an adjusted net profit of $8.6 million ($0.12 per share) on revenues of $85.1 million for the three months ending Sept. 30, 2015, up 77% from a profit of $4.9 million ($0.07 per share) on revenues of $60.7 million in the third quarter of 2014. For the nine months ending Sept. 20, 2015, the company earned $33.4 million ($0.47 per share) on revenues of $254.5 million, up from a profit of $18.7 million ($0.27 per share) on revenues of $188.1 million in the same period of 2014, a 79% increase.

During 2015's Q3, Imax signed deals for 33 theater systems, of which 11 were new sales and sales-type leases; the rest were joint revenue sharing deals. In the same quarter of 2014, 36 systems were signed; of which 22 were new sales or sales-type leases. The company installed 34 systems in this year's Q3, and upgraded 10; in the same period last year it installed 20 and upgraded 20. Nine of the installations were upgrades to the new IMAX laser system.

Imax signed 86 theaters and installed 80 in the first nine months of 2015; in both cases, about half were in China.

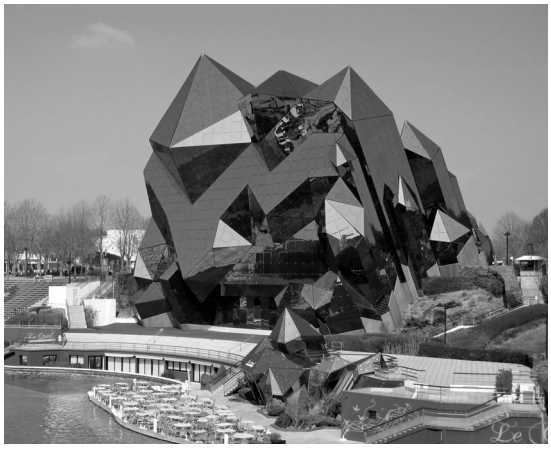
As of Sept. 30, 2015, the backlog of theaters stood at 364 new theaters and 20 upgrades; of these, 69 are for the IMAX laser system. At the same point last year the backlog was 413 new theaters and 26 upgrades.

As of the end of the quarter, the total number of IMAX theaters stood at 1,008, up from 880 at the same time last year, representing a doubling of the theater network in just under five years. Of the 1,008 screens, 887 are in multiplexes, 19 are in commercial destination theaters, and 102 are in institutions.

As we previously reported (*see The Biz, Oct.-Nov. 2015)*, the initial public offering of shares of Imax China took place on Oct. 7, raising $248 million.

Imax insider trades

In the past three months, three top **Imax Corporation** executives have sold more than 325,000 shares of company stock (almost 0.5%), netting a total of at least $6.9 million among them. CEO **Richard Gelfond** has sold 138,382 shares since Sept. 1 (mostly in automatic transactions as laid out in his compensation package), netting over $3.5 million; chief technology officer **Brian Bonnick** sold 76,990 shares, earning over $1.75 million; and executive vice president **Robert Lister** sold 70,500 shares (all automatically) to net over $1.6 million.



The Kinemax IMAX theater in Futuroscope in France.

In addition, in November, major shareholder **Kevin Douglas** sold 350,000 shares for a total of $13.6 million. He continues to hold 8.9 million shares, or roughly 13% of all outstanding shares.

Futuroscope getting IMAX laser

Parc du Futuroscope in Poitiers, France, will replace the IMAX 15/70 (2D) film projector in its 28-year-old **Kinemax** IMAX theater with an IMAX laser system while the park is closed for winter. The theme park, one of the most popular attractions in the country, operates five IMAX theaters in different configurations, including IMAX 3D, IMAX Dome, IMAX Solido (3D in a dome), and IMAX Magic Carpet, with two full IMAX screens, one in front and one beneath the audience, visible through glass panels in the floor. It is the only theater of its type in the world.

Kinemax is the only theater set for a laser upgrade at this time. The new system will premiere with the park's seasonal opening in April 2016.

Imax theater and film deals

Imax Corporation has made a multi-film deal with **Twentieth Century Fox** as well as deals for DMR releases of the next films in the ***Star Trek*** and ***Divergent*** franchises, and signed agreements for 15 theaters in China and Japan.

Under the agreement with Fox, the first multi-picture deal it has signed with Imax, films to be released to IMAX theaters include ***Deadpool***, ***Independence Day Resurgence***, ***Maze Runner: The Death Cure***, and the next ***Wolverine*** film, as yet untitled.

Imax announced in late November that ***Star Trek Beyond*** will be released to IMAX theaters worldwide starting on July 22, 2016. The film, produced by **Paramount Pictures**, **Skydance**, and **Bad Robot**, will be directed by **Justin Lin** and star **Chris Pine**, **Zachary Quinto**, **Zoe Saldana**, and **Idris Elba**. It is the third film in the latest reboot of the popular science fiction series.

In a separate announcement, **Lionsgate** announced that two films, ***The Divergent Series: Allegiant*** and ***Deepwater Horizon*** will be released to IMAX theaters domestically and internationally. The former is the third in the *Divergent* teen adventure series and opens on March 18, 2016. The latter is a dramatization of the 2010 oil rig disaster in the Gulf of Mexico, starring **Mark Wahlberg**, and opens on Sept. 30, 2016.

In Japan, **Toho Cinemas Ltd.** will add ten IMAX screens to the one it opened in Tokyo in April of this year, bringing its total to 11. Imax had recently signed a deal with parent company **Toho Co. Ltd.** for two DMR films, the first of which opened in Japan in August.

THE BIZ

NEWS

In China, **Hengdian Entertainment Co. Ltd.** signed a deal for five IMAX screens to be built in new theaters across China.

Sydney IMAX loses LG branding

The **LG IMAX Theatre Darling Harbour** will drop the LG branding at the end of the year, as the deal that the theater's landlord made with the South Korean electronics manufacturer ends on Dec. 26. It will be known simply as the **IMAX Theatre Darling Harbour**. CEO **Mark Bretherton** explains that the end of the relationship doesn't hurt the theater, "as the LG revenue was not part of the theatre's revenue stream." He added, "At this stage I'm not expecting a replacement naming sponsor in the near future."

As we reported last month, the fate of the theater, which has the largest cinema screen in the world, is uncertain, as a developer is planning to build a large new office building on the site. (*See The Biz, Oct.-Nov. 2015.*)

Lionsgate gets nWave's *Crusoe*

Robinson Crusoe, an animated version of the classic tale by Daniel Defoe produced by **nWave Pictures**, will be distributed by **Lionsgate** in the U.S. The 3D film was directed by **Ben Stassen** and **Vincent Kesteloot**. The film is set to be released by **StudioCanal** in Belgium in March 2016 and elsewhere in Europe after that. The North American opening will be sometime in mid-2016, according to a press release.

Rizvi Traverse to acquire RealD

RealD, a leading maker of 3D systems for digital cinema, will be acquired by **Rivsi Travers Management, LLC**, a private equity investor, at which point RealD will become a privately held company. In an all-cash merger transaction valued at about $550 million, RealD shareholders will receive $11.00 for each share, a 19% premium over the closing price on Oct. 1, 2014, the last unaffected trading day before the announcement of the intent to take the company private. The deal requires the approval of the holders of a majority of the shares, to be sought at a meeting in February 2016. The transaction is expected to close in the company's fourth quarter of fiscal 2016.

Michael Lewis, chairman and CEO, will continue in those roles under the new arrangement.

PERSONNEL

Tennessee's Arant to retire

Charlie Arant, who has served as president and CEO of the **Tennessee Aquarium** in Chattanooga for more than 20 years, has announced that he plans to retire. The aquarium's board has begun a search for his replacement, and Arant will continue to serve until his successor is named.

Charlie Arant

Arant became the aquarium's third president in March 1995, and since then he has overseen the opening of the 300-seat IMAX 3D theater in 1996, the construction of a second building, Ocean Journey, and the launch of the River Gorge Explorer, a boat offering two-hour tours of the Tennessee River Gorge, in 2008.

Before joining the aquarium, Arant worked for 28 years at IBM.

Body leaves 3D Entertainment

Alexandra Body has left **3D Entertainment Distribution** to take a position with **Ymagis**, a Paris-based digital cinema company. Body worked at 3D Entertainment Distribution for 11 years, most recently as its senior manager for exhibitor relations.

Body will be field marketing manager for Ymagis, which, she explains, "specializes in all things related to digital cinema, from financing cinemas' digital transition and digital systems installations to post production work, DCP creation, content delivery, restoration, archiving, etc."

Alexandra Body

The company recently acquired Éclair, France's oldest film lab, which filed for bankruptcy last summer.

She tells *LFX* that she is "tremendously grateful for all the opportunities and wonderful experiences [that] working with the Mantellos [principals of 3D Entertainment], and of course the rest of the 3DED team, allowed me."

Huggins to head AXYZ Studios

Charlotte Huggins has formed AXYZ Studios with three partners to produce "scalable virtual reality experiences tailored for theme parks and visitor attractions," according to a release. The other principals are **Ryan Miziker**, **Sean Chung**, and **Raj Deshpande**.

Charlotte Huggins

She says the company will produce "cinematic experiences for fun, thrills, and immersive entertainment: pre-rendered 360-degree shows, 4–18 minutes long, for out-of-home venues."

Huggins is best known to the GS community for her stint at **nWave Pictures** from 1996 to 2006, where she produced eight animated GS films, including ***Encounter in the Third Dimension***, ***Haunted Castle***, and ***Fly Me to the Moon***. She has since produced the theatrical features ***Journey to the Center of the Earth*** (2008) and ***Metallica Through the Never*** (2013).

The 2015 GSCA Conference in San Francisco

*(from **GSCA** on page 1)*

the pixels. Imax's open box is made of invar, an alloy that is highly resistant to expansion or contraction with temperature changes, and allows for improved cooling, more precise alignment (hence better resolution), and increased contrast.

The system can project images with a 1:1.43 aspect ratio (the same as IMAX film) using all the pixels on the 4K chips (whose native ratio is 1:1.9) thanks to lenses that provide a vertical anamorphic stretch. (This, and other factors, makes the system proprietary: only Imax Corp. can prepare digital masters that will play on IMAX digital projectors.)

The laser system provides the same 2D reflectance levels (22 fL) of previous IMAX film and digital systems. (The DCI standard is 14 fL.) It can display all the colors in the Rec. 2020 specification, a standard developed by the **International Telecommunication Union** for Ultra-High Defintion TV (UHDTV) that expands the color gamut beyond those of HDTV and DCI.

However, certain details about the IMAX laser system were not disclosed by Lutz, Keighley, the brochure that Imax placed in attendees' conference bags, or any other publicly available source that *LFX* has seen. Lutz and Keighley both claimed that the IMAX laser system's contrast ratio is more than twice that of film. Keighley touted the system's intra-frame contrast, and mentioned that IMAX film systems have an on-off ratio of 4,000:1, but didn't explicitly state either ratio for the laser. (In an interview published online, Imax CTO **Brian Bonnick** said the contrast ratio of 15/70 film is 4,500:1, and that the IMAX laser is "multiples better" than that, but didn't give a number.)

Keighley said that the reflectance level of 3D IMAX film systems is 7 fL, of 3D IMAX xenon digital is 6 fL, and that IMAX laser is twice as bright, but he again didn't state the actual number.

Foot-Lamberts are a measure of light reflected from a screen, not the output of the projector. Screen reflectance varies based on the size of the screen, the throw distance, screen gain, and other factors. Laser systems can be tuned to a desired output or reflectance level by adding or removing laser modules.

Most other laser projector manufacturers provide light output specs in lumens, an absolute measure of the light produced by the system, and state their projectors' contrast ratios. This allows potential buyers to make direct comparisons between systems. To our knowledge, Imax has not publicly disclosed the light output of its laser system in lumens or disclosed its contrast ratios.

Imax Corp. VP Mike Lutz.

In the Technical Session, Imax VP **Patricia Keighley** said that 22 Hollywood films and 16 documentaries have been mastered for the IMAX laser system.

To show off the image quality of the IMAX laser system, David Keighley presented five-minute clips from seven GS films shot mostly or entirely on 15/70 film, ranging from 1976's classic ***To Fly!*** to 2011's ***Rocky Mountain Express***. Clips shown in 3D included ***Space Station***, ***Hubble 3D***, and ***Born to Be Wild***. The audience applauded appreciatively after each one.

Opinions on the IMAX laser

The image projected by the IMAX laser system was uniformly praised by presenters and others who spoke publicly as well as by conferees in their private conversations. Its clarity, brightness, and contrast were considered by virtually everyone to rival or exceed those of 15/70 film. **Martin Howe**, CEO of **TEQ4**, told *LFX*, "The image was bright, colorful and punchy, both in 2D and 3D. Good center-to-edge brightness uniformity contributed significantly to the overall impression of brightness, particularly when compared to film which notoriously darkens at the corners and edges. A clip of *Rocky Mountain Express* showed beautiful gray scale rendering of a black and white image which looked like it could have been hand painted. It was gorgeous."

Under the heading of "being picky," he added that "in the front half of the theater it was obvious that the resolution of this digital system falls short of the capability of film, which was particularly apparent in the side-by-side film vs digital comparison, and shows that there is still an opportunity for higher resolution digital systems for the giant screen." The issue was "less apparent" in the rear of the theater. He also noted some speckle when sitting in the front of the theater.

Tim Sassoon of **Sassoon Film Design** agreed about the lower apparent resolution when sitting close to the screen, but disagreed about the speckle, saying it "hasn't been a problem for me."

A long-time GS veteran who asked not to be identified also noticed the speckle, but found the image "stable and colorful, with high brightness," although it was "not as sharp as 15/70mm film."

All three agreed that the Infitec 3D glasses used during the conference were, as Howe put it, "simply not up to scratch." Echoing others' thoughts, he added, "The field of view was too small, cropping the image from the screen so that to scan the

full image I had to move my head, not just my eyes. Also there was a disturbing amount of reflections in the glasses, mostly from the light bouncing off my face to the inside of the glasses, causing a significant reduction in contrast." At the conference, Imax reps recognized the shortcomings of the glasses and said that newer versions were being developed.

My Theater Had a Great Year

Barry Thorson of **Telus Spark** in Calgary, AB, Canada, moderated an unprecedented "mega-session" entitled "My Theater Had a Great Year (And other Tales of the Unimaginable)." The session featured quick four-minute presentations by no fewer than 12 panelists, in four groups, about the successes they had experienced in the past year.

Calgary's Barry Thorson (at lectern) and the 12 members of the "My Theater Had a Great Year" panel.

Great Ideas That Worked

Gil Perez, of Chicago's **Museum of Science and Industry**, said "It's all about going back to basics." For MSI, that has meant going back to a two-film-per-year schedule, which allows Perez to focus his limited marketing dollars on those two titles instead of four or five. Having only two films makes it easier for visitor to make a decision; too many options can paralyze them. "People say, 'Give me admission [to the museum], I'll come back later and figure out [which film to see.]' Once you've lost them, they're probably not coming back." Excellent customer service is also a key to success. These factors led his 353-seat OMNIMAX theater to increase attendance by 10% over last year.

The **Montreal Science Center**'s **Julie La Roche** talked about taking risks with the example of booking *Jerusalem*, which, she pointed out, was potentially more controversial than a film about elephants. La Roche's research indicated that mass media buys were still very effective and helped her arrive at a marketing budget for the film, based on a goal of CDN$60,000 (US$53,000) in revenues. The campaign was targeted at older visitors, 25 to 50 years old, practicing Jews, Muslims, Catholics, and "educated people who like to travel." Many of these people were new customers. About half the budget was spent on TV, the rest online. Building up word of mouth early was a key goal, and the film's director, and Montreal resident, **Daniel Ferguson**, helped do that by reaching out to the various local communities. Discounts for Monday and Tuesday shows filled up those otherwise empty seats, as did working with travel agents who specialized in trips to Israel. In the end the campaign doubled the expected goals and outperformed other recent films.

Amy Quesenberry of the **Orlando Science Center** said that in that "saturated market" the focus has turned to getting visitors into the museum, rather than promoting the 309-seat **Iwerks** 15/70 dome theater. The center also has a smaller 3D digital venue that has been branded as a National Geographic theater and now also shows Hollywood films. The theaters now have no marketing budget for films, and theater admission is included in the building admission. The result has been an increase in member households from 7,000 to 9,500, driven in large part by including movies in the price. Theater attendance jumped from 140,000 to 180,000.

Exhibition Sponsorships

Peter Bak-Larsen heads the **Tycho Brahe Planetarium** in Copenhagen, where attendance rose by 29% between 2013 and 2014, thanks in large part to the promotional coupon codes that one-quarter of all visitors used. Bak-Larsen develops promotional partnerships with companies that have the same target market he does. The partner sends out e-mail to its customers offering a discount to a show. "It's a win-win-win for everybody." These campaigns complement more traditional marketing at little extra cost, and don't necessarily cannibalize full-price tickets. In fact, word of mouth from the discounted customers can actually increase sales of full-price tickets. He has also learned that repeating a promo campaign with the same partner will generate about half the results of the first. So you'll need to keep looking for new partners.

The **Saint Louis Science Center**'s **Jackie Mollet** manages the 325-seat IMAX Dome theater. The center is free to the public and 45% of its budget is provided by the city; the balance is earned or raised. Knowing that her visitors come two to three times a year, she books the theater to take advantage of that pattern, programming primarily for school groups in the spring, tourists in the summer, and older visitors in the fall. As the top revenue source for the museum the IMAX theater budgets its marketing accordingly: about $100,000 per film. (This big number drew cheers — and some envy — from the audience.) Showing ***Island of Lemurs: Madagascar*** allowed the center to enter into a rare and successful cross-promotion with both the **Saint Louis Zoo**, which has a lemur exhibit, and the **Missouri Botanical Garden**, which has a research project in Madagascar.

Rueben Piza, from Mexico City's **Papalote Children's Museum**, explained that

*(see **GSCA** on page 8)*

*(from **GSCA** on page 7)*

his 31-year-old museum is closed for a two-year renovation, set to be completed in July 2016. The museum has a 333-seat IMAX GT film theater and a digital full-dome theater as well. He has found that using popular local talent to record the Spanish language version of GS films provides a big boost to ticket sales. Mexican actor **Bruno Bichir** recorded ***Mysteries of the Unseen World*** for the theater, and attracted a lot of media attention to the film, effectively increasing the marketing budget at no cost. Bichir also agreed to record an introductory video that is played before each screening.

Effective Ticketing Strategies

Paul Wild manages **IMAX Victoria** in the **Royal B.C. Museum** in Canada, and discussed the annual pass program he has offered for many years. The 400-seat flat-screen theater opened in 1998, but attendance fell off after six or seven years. Research discovered that lapsed viewers felt ticket prices were too high, and wanted more films per year. Declining tourism following the 9/11 attacks made appealing to locals more important. The theater's response was the annual pass program, which allows visitors unlimited visits to documentary (non-Hollywood) films for a calendar year. The initial projection for the first year was 5,000 passes, and they actually sold almost 7,000. Participation rose steadily over the next five years, and since 2009, about 19,000 people have bought the passes each year, at a price of about CDN$46. Pass holders average between four and seven uses of their pass per year. The program has earned the theater between CDN$800,000 and CDN$950,000 per year, not including the additional concession or gift shop sales.

Paul Fraser of **Blaze Digital Cinema Works** conducted a Web survey of every GSCA theater member (140 screens at 99 members) and obtained their adult ticket prices, converting non-U.S. currencies to U.S. dollars. He found that the average ticket price (for GS documentaries) across all surveyed theaters was US$9.35. Broken down, flat screen theaters were 11% higher than domes, IMAX theaters were 15% higher than non-IMAX, and international theaters were 6% higher than domestic screens. The price of a GS documentary averaged about 92% of the price of a 2D feature at a local multiplex. Hollywood films at all theaters averaged $13.75, but at multiplexes only were $15.63. Museum combo tickets, which package admission to the museum with a GS film, are offered by 78% of non-multiplex theaters, and average $22.05. He concluded that combo pricing should offer a notable saving over the full price — at least 15% to get noticed — and that discount should be heavily promoted. He noted that many theaters' Web sites don't highlight the savings that the combo ticket provides. He emphasized the importance of good Web design to make the process of buying a ticket as quick and easy as possible.

Julie La Roche of the Montreal Science Center.

The **Cincinnati Museum Center**'s **Dave Duszynski** said that major structural renovations to its landmark building will close the 25-year-old OMNIMAX theater for two years, starting in mid-2016. The fiscal year that ended on July 31, 2015, saw theater revenue that was up 61% over the previous year, and 37% over expectations. His team identified several factors that were responsible, including a general museum advertising campaign and a strong film slate that included *Jerusalem.* That film unexpectedly tripled attendance and drew in a largely adult audience. They realized that they had "gotten into this rut where we focused too much on being family friendly," and are now looking more closely at films that will appeal to adults. "We have things for children in the museum; we find the adults really want something just for them." That is what led them to book *D-Day.* Following Victoria's lead, Cincinnati launched an OMNIMAX Club Card in late 2013, which allows unlimited viewings for a one-year period. Sales have been particularly strong during the winter holiday period, but have dropped off as the July 2016 closing approaches. Concerns about the club card possibly cannibalizing the museum's regular member program turned out to be unfounded, and Duszynksi sees the program as very successful.

New Ways to Use Your Theater

Chris Hurtubise of **COSI Columbus** in Ohio talked about her two theaters: a 4K digital GS theater and a digital fulldome planetarium that was reopened in November 2014 after being closed for several years. A pricing study recommended making all upcharged attractions the same price, which lowered the price of tickets to the GS theater. Guests also asked for a "do-it-all" ticket — "they wanted the ability to not have to make decisions" — which now represents 6–7% of all upcharges. To differentiate the planetarium from the GS theater, the latter was rebranded as the **National Geographic Giant Screen Theater COSI**. A new online ticketing system made it easier for visitors to buy tickets in advance, and provides the museum more data about them and their buying habits.

Showing older Hollywood films in a summer movie series has helped bring new audiences to the center, especially adults. Although the first two years didn't turn a profit, this year's did, and a zombie series is planned for next year. A winter movie series added last year, aimed at families, featured Disney's ***Frozen*** and was very successful.

Telus World of Science Edmonton's

IMAX theater opened in 1984 and was converted from film to IMAX digital in 2013. COO **Steve Baker** said that in the substantial renovation to the theater undertaken at that time, the seating capacity was lowered from 274 to 190 "to enhance the visitor experience: wider seats, more legroom, the whole nine yards. It was just too tight the way it had been before." (The theater switched again from xenon digital to IMAX laser while the conference was under way.) Despite the 35% drop in seats, attendance jumped 18%. Baker credited the boost to the strong performance of *Jerusalem*, *D-Day*, and other institutional films that helped bring in a new constituency: seniors. The digital system also allowed them to show Hollywood films like *Raiders of the Lost Ark*, which accompanied the exhibit "Indiana Jones and the Adventure of Archaeology." Although they only intended to show the film for a few weeks, it was so popular that the run was extended for the entire seven months of the exhibit, selling 6,700 tickets over all. Other titles like *Harry Potter* and *Interstellar* also performed well.

However, Baker said, their commitment to the institutional side remains strong. People coming for the Hollywood films notice the non-fiction films and buy tickets for them as well. Like COSI, Edmonton is running a summer film festival, in this case dedicated to science fiction. The goal is to "get them in the door so that they can then look at the rest of our offerings, from our exhibits to our regular programming, and to get the kids in here."

Berend Reijnhoudt runs a commercial standalone IMAX Dome theater, **Omniversum**, in the Hague, Netherlands, that continues to use the IMAX 15/70 film projector installed when it opened in 1984. In his view, "the recipe for success is simple, but not easy." The first ingredient is marketing. "If you don't let the world know about your product, no body will buy it." His marketing staff consists of three people with a budget of about $400,000. The next point is programming: selecting films your audience will like, and playing them at times that they will come, recognizing that you will have different audiences at different times of the day and the week. The third ingredient is more marketing!

Reijnhoudt said that although you have to focus on your core business, as TV's Dr. House says, "If you're not willing to look stupid, nothing great is ever going to happen to you." To that end he has started programming live performances by bands with GS films as the backdrop, "because we always want the film as part of the experience." Offered four times a year at €25 (US$27.50) per ticket, the two-hour shows are so popular they routinely sell out without any marketing.

A 4K DCI-compliant Christie ran insert video on The Tech's dome.

Dome Day

On Saturday, Sept. 12, the conference moved about 50 miles (80 kilometers) southeast to the **Tech Museum of Innovation** in San Jose, CA. The museum's 295-seat IMAX Dome theater opened in 1998, and in addition to its existing IMAX 15/70 film projector, it was outfitted for the meeting with an **Evans & Sutherland** Digistar 5 "8K" digital fulldome projection system. The system included five **Christie** 30,000-lumen 4K projectors and E&S's proprietary auto-aligning and auto-blending technologies, installed temporarily for Dome Day. Sound for the Digistar presentation could not be played through the IMAX sound system.

Dome Day consisted of a demonstration of the full capabilities of the Digistar 5, screenings of four GS films using the IMAX film projector, and a presentation by veteran GS filmmaker **Greg MacGillivray** entitled, "How I Stopped Worrying and Learned to Love the Dome."

Several presenters, including Tech Museum president **Tim Ritchie**, remembered and spoke fondly of **Bob Grimm**, the museum board member and supporter who died last spring (*see Shorts, March-April 2015*).

Digistar 5 demo

E&S's **Michael Daut** explained that the five projectors were putting out a total of 150,000 lumens on the dome, a measured reflectance of 3 fL on the 0.4-gain dome, with 30 million unique pixels. (Where the images from the projectors overlap, two projectors will be displaying the same pixel. These dupes don't count toward total system resolution.) The system can project in 3D using active LCD glasses from **XpanD**.

Although the term "8K" has been used by several fulldome system providers (including E&S) to designate systems that use multiple 4K projectors, in these systems, the number of unique pixels displayed across a half circumference is closer to 6,000 than 8,000. However, Daut explained, it is possible to install a "true 8K" system with 50 million unique pixels, but it takes nine or ten projectors, adding, "as you might imagine, that's not super practical, but it can happen." Laser projectors are also available.

Technical Committee co-chair **Tim Hazlehurst**, of **Marbles Kids Museum** in Raleigh, NC, presented several clips of fulldome footage created at 8Kx8K resolution at 60 fps, displaying enhanced clarity that higher frame rates provide, which, as discussed in another presentation at the conference (*see article on page 2*), has a more powerful effect than increasing the pixel count.

E&S has led the fulldome world in converting GS films to fulldome digital format, and currently has nearly 50 titles available. Clips from several of these were also presented, from 8K and 4K scans, at

*(see **GSCA** on page 10)*

*(from **GSCA** on page 9)*

24 fps. E&S has developed several ways to map a rectangular image shot on 15/70 film or digitally onto the surface of a dome, and several clips demonstrated these different methods.

The presentation also included a series of 3D giant-screen trailers, a 3D montage of clips from various producers, and a demo by E&S's **David Sasich** of the company's digital real-time planetarium software. Christie's **Bryan Boehme** showed off a Christie 4K DCI-compatible projector that projected a 60-foot- (18 meter-) wide rectangular image on the front of the dome, which could be used to show Hollywood features.

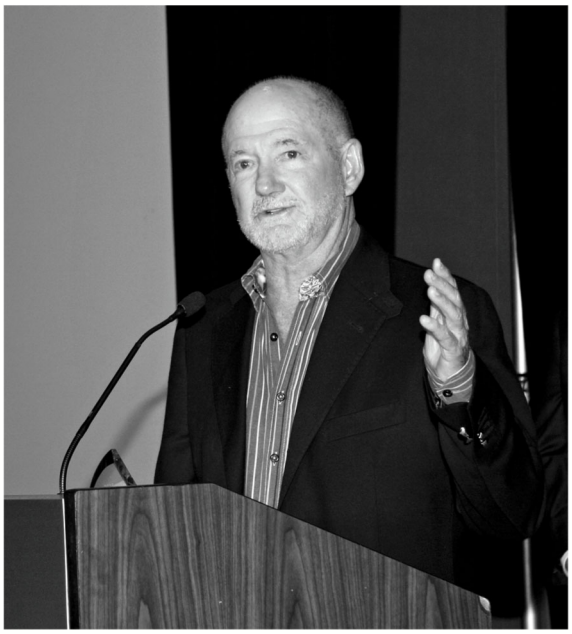
MacGillivray on the dome

After a brief live introduction, MacGillivray's presentation alternated between clips from his films and a video that he prepared to describe the special characteristics of shooting for a dome theater. In person, he explained that shooting for the dome is "a foreign subject to anyone who's gone to film school, anyone who's worked on television projects. Domes are just weird. They've always been weird. You really have to be careful with shooting for the dome. Most films don't work on this screen."

But he said that it's worth the effort to do so because in his experience of making GS film for 40 years, half of the attendance and income for his films has come from dome theaters, even though they have never represented the majority of theaters. Nevertheless, the perform better. This is one of the reasons he has shot and prepared special prints just for the dome. However, he said that he expected digital projectors to improve image quality in domes even more in the future.

Segueing to video, he took viewers on a quick tour of the MFF offices, including the storyboards for his first GS film, with partner **Jim Freeman**, ***To Fly!***, made for the **National Air and Space Museum** in 1976. It was designed for NASM's flat screen, so when the **Reuben Fleet Space Theater** in San Diego, the first OMNIMAX (IMAX Dome) theater in the world, asked the following year to show it, "I was mortified. 'It would look horrible,' I told them." But a projection lens that shrank the image made it work better, and in shooting his next two films, he kept the dome screen in mind. (By 1980 there were 18 IMAX theaters in the world, eight domes, ten flat screen.)

Over the next decade, he refined the techniques of shooting for the dome, including using gradient filters that darkened the upper half of the frame to help improve contrast; designing a special camera that shifted the lens so that its sharpest focus would be in the lower third of the frame, the "sweet spot" for dome framing; and shooting sequences with forward camera motion, which is particularly effective on the dome.



Greg MacGillivray spoke on shooting for the dome.

A clip from ***To the Limit*** (1989), made for the Museum Film Network, illustrated many of these techniques.

The next advance was a small 15/70 camera, designed with Imax's **Bill Shaw**, that was light enough to mount on a Steadicam stabilizer system. This overcame the main difficulty with forward dolly shots: the fact that the dolly tracks would be visible. A similar advance was SpaceCam, which provided a gyro-stabilized mount on a helicopter or airplane.

Maintaining high contrast is very important in dome shows, so MacGillivray shoots key sequences at dawn or sunset whenever possible. He also makes prints directly from the original camera negative, with provides the highest possible resolution and contrast.

These techniques were demonstrated with 15/70 clips from ***The Discoverers*** (1993), ***Everest*** (1998), ***Greece*** (2006), and ***Humpback Whales*** (2015).

He said that digital cameras and post techniques make it possible to make shots and sequences work even better on the dome. He concluded by saying that many of the problems involved in shooting for the dome in the early days have been solved. "Over the past 40 years, since the production of *To Fly!,* there's been a renaissance of production techniques for the dome experience, and it's led us all to believe that the dome is here to stay!"

Acknowledgements

Evans & Sutherland went to extraordinary lengths to provide the temporary installation of the Digistar 5 system for Dome Day, custom designing a system that could in installed in the less-than-optimal locations that were available for the five projectors, installing it without disturbing the regular schedule of public shows, running additional power lines for the projectors, completely removing the two projectors inside the theater for a donor event shortly before the conference, and more. E&S's Michael Daut told *LFX* that it was the most challenging installation the company had ever undertaken.

The following E&S staffers made it happen:

Installers: **Dennis Elkins**, **Mike Bass**, **Ryan Kolar**.

Video encoding and wrangling: **Bryce Buchanan**.

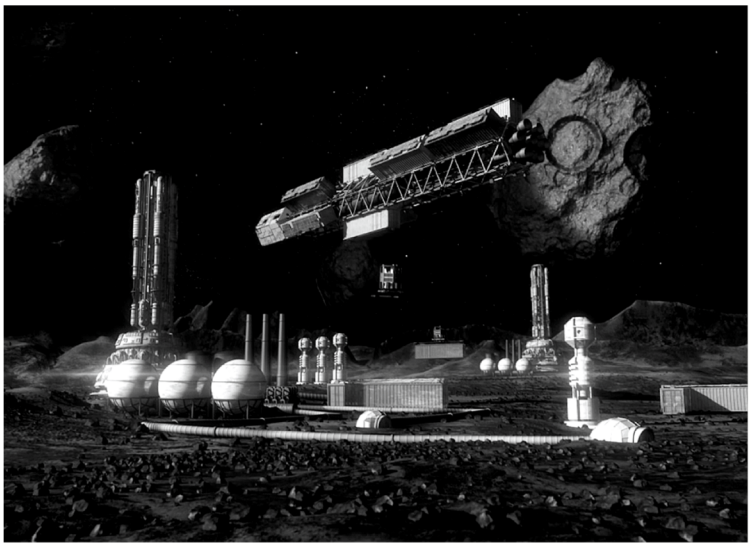
Logistics: **Bruce Lyman**, **Jill LeClair**.

Management: **Kirk Johnson**, **Michael Daut**.

Sales: **David Sasich**.

In addition, Daut praised the staff of the GSCA and of the Tech Museum for all their help. "We really appreciate them opening their doors for us and assisting us throughout the process."

Premiering This Month



Space Next 3D

Space Next 3D

"Space Next takes us on a journey of mankind's pursuit to reach the stars, beginning with the earliest dreams that sparked the imagination to build machines to take us into flight. The impact of war on the development of technology and the space race inspired generations and the inventions that have changed the world forever. But now the end of NASA's shuttle program leaves the question of what's to come. Space Next looks to inspire a new generation to once again look to the stars, and to reveal the possibilities of what's to come as not just national space programs develop new technologies but as private organizations look to reach to the stars as well."

Produced by **Afterglow Studios**, distributed by **BIG & Digital**. Directed and produced by **Luke Ployhar,** written by **Scott Pearson**. Release: Dec. 4.

In the Heart of the Sea

"In the winter of 1820, the New England whaling ship *Essex* was assaulted by something no one could believe: a whale of mammoth size and will, and an almost human sense of vengeance. The real-life maritime disaster would inspire Herman Melville's *Moby-Dick*. But that told only half the story. ***In the Heart of the Sea*** reveals the encounter's harrowing aftermath, as the ship's surviving crew is pushed to their limits and forced to do the unthinkable to stay alive. Braving storms, starvation, panic, and despair, the men will call into question their deepest beliefs, from the value of their lives to the morality of their trade, as their captain searches for direction on the open sea and his first mate still seeks to bring the great whale down."

Produced by **Village Roadshow Pictures** and distributed by **Warner Bros. Pictures**. Directed by **Ron Howard**, starring **Chris Hemsworth**, **Cillian Murphy**, **Brendan Gleeson**, **Ben Whishaw**, **Michelle Fairley**. 2D. DMR. Release: Dec. 11.

Star Wars: The Force Awakens

A continuation of **George Lucas**' saga, set thirty years after ***Star Wars: Episode VI - Return of the Jedi***.

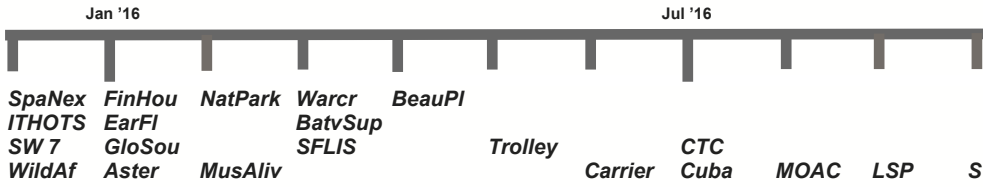
Produced by **Lucasfilm** and **Bad Robot**, distributed by **Walt Disney Studios Motion Pictures**. Directed by **J.J. Abrams**, starring **Daisy Ridley, Carrie Fisher, Mark Hamill, Adam Driver, Harrison Ford, Peter Mayhew, Oscar Isaac, John Boyega, Simon Pegg, Andy Serkis**.

Wild Africa

"Come on a spectacular 3D ride across, over, and through the magical realms of the most dramatic continent on earth: Africa. Our guide through this enchanted kingdom is the sorcerer itself: water. Water crafts wild Africa, conjuring up life wherever it journeys, traveling above the plains on seasonal winds, cascading along raging rivers or sheltering coral cities. Audiences will be plunged into fantastic places and meet amazing creatures. On the journey through the magical realms of Africa, we'll discover the fascinating secrets of this enchanted kingdom. How spectacular thermal geysers help turn thousands of flamingos pink and create the perfect conditions for them to breed; why the heat beating down on waterless dunes in the Namib desert forces a lizard to dance; and why it snows on the equator. It's an adventure where you will truly believe the real world is more extraordinary and awe-inspiring than any fiction."

Produced by **BBC Earth** and distributed by **Giant Screen Films**. Directed by **Patrick Morris**, **Neil Nightingale**, and **Mike Slee**; produced by Neil Nightingale, **Myles Connolly**, and **Amanda Hill**; photographed by **Mark Deeble** and **Robin Cox**; scored by **Patrick Doyle**. Executive Producers: **Deepak Nayar**, **Stuart Ford**, **Marcus Arthur**, **Mike Newell**, **Mike Devlin**, **Miles Ketley**. Release: Dec. 15.

Wild Africa



All films are 3D unless noted, underlined titles are 2D
* New listing.
Updated information is printed in **bold**.
Unless noted, all films run about 40 minutes.
Some titles with limited release territories are not listed.

The Finest Hours
Walt Disney Pictures; distributor: Walt Disney Pictures; director: Craig Gillespie. Cast: Chris Pine, Eric Bana, Ben Foster, Graham McTavish, Rachel Brosnahan, Kyle Gallner, Casey Affleck. Release: Jan. 29, 2016. DMR.

Earthflight 3D
BBC Earth; distributor: Giant Screen Films; director, producer: John Downer; executive producers: John Downer, Neil Nightingale. Release: January 2016.
– In post-production.

Global Soundscapes: Mission to Record the Earth (wt)
Foxfire Interactive, Masters Digital; digital distributor: Foxfire Interactive; producers, writers: Brad Lisle, Tim Archer; DPs: Marcus Lehman, Sean White; executive producer: Brad Lisle. 2D. Release: January 2016.
– Principal photography is complete.
– Post production is under way.

Asteroid: Mission Extreme
National Geographic Studios; distributor: National Geographic Studios; director, producer: Annette Sotheran-Barnett; script: Annette Sotheran-Barnett, Mose Richards; executive producer: Brooke Runnette, Steven T. Savage. Release: October (fulldome), early 2016 (flatscreen).
– Fulldome version complete; post-production on GS edition continues.

Museum Alive 3D
Colossus Productions, Atlantic Productions; distributor: Atlantic Productions; director: Daniel M. Smith; producer: Anthony Geffen; script: David Attenborough, Mike Davis; DP: Tim Cragg, Chris Parks; score: Ilan Eshker. Cast: David Attenborough. Release: 2016.

National Parks Adventure
MacGillivray Freeman Films; distributor: MacGillivray Freeman Films; director: Greg MacGillivray; producer: Shaun MacGillivray; DPs: Brad Ohlund, Greg MacGillivray, Ron Goodman; script: Tim Cahill, Stephen Judson; score: Steve Wood. Release: Feb. 12, 2016.

Warcraft
Universal Pictures; distributor: Universal Pictures; director: Duncan Jones. Cast: Dominic Cooper, Travis Fimmel, Paula Patton, Ben Foster, Toby Kebbell. Release: March 11, 2016. DMR.

Batman v. Superman: Dawn of Justice
Warner Bros.; distributor: Warner Bros.; director: Zack Snyder. Cast: Ben Affleck, Henry Cavill, Amy Adams, Jason Momoa, Gal Gadot, Jesse Eisenberg, Diane Lane, Jeremy Irons, Holly Hunter, Laurence Fishburne. 2D. Release: March 25, 2016. DMR.
– Filmed in part with IMAX cameras.

The Search for Life in Space
December Media; distributor: MacGillivray Freeman Films; director Steve Westh; producer: Stephen Amezdroz; script: Alex Low; executive producer: Tony Wright. Release: March 2016.

A Beautiful Planet
Imax Corporation; distributor: Imax Corporation; director/producer: Toni Myers; DP: James Neihouse. Release: April 29, 2016.
– October: Principal photography wrapped.

The Trolley (wt)
Stephen Low Company; distributor: Stephen Low Company; director: Stephen Low; producer: Pietro Serapiglia . 2D Release: spring 2016.
– Filmed in Geneva, Lyon, Montpellier, Marseille, Nice, Milan, Toronto, and Hong Kong in 2013 and 2014.

Carrier (wt)
*K2 Communications, Giant Screen Films; distributor: K2 Communications, **Giant Screen Films**; director: Stephen Low; producers: **Don Kempf, Bob Kresser, Mark Kresser, Andy Wood**. Release: 24-min. version: late spring 2016; 40-min. version: early 2017.*

Creating the Cosmos
PBS Digital Studios, Joey Shanks Productions; distributor: tba; director: Joey Shanks; producer: Sean Huffman; DP: Joey Shanks; script: Tommy Wrenn; score: Big Fok. 2D. Release: summer 2016.
– September: filmed with the Phantom high-speed camera to observe the inner world of a collapsing bubble caused by cavitation.

Cuba
Golden Gate 3D; distributor: tba. Release: summer 2016.

Mysteries of Ancient China
Giant Screen Films, Top Production China; distributor: Giant Screen Films; director: Keith Melton; producers: Don Kempf, Andy Wood; DP: Reed Smoot; script: Mose Richards. Release: summer 2016.
– October, November: Principal photography in China.
– November: Editing begins.

Lightspeed Pioneers
No Final Frontier Productions, Mind's Eye Creative, Wonder Mill Cosmos; distributor: BIG & Digital (flat-screen), Evans & Sutherland (fulldome); director, producer, writer: Lee Fanning. 2D. Release: Fall 2016.

Secrets of the Universe
Stephen Low Company; distributor: K2 Communications; director: Stephen Low; DP: Mark Poirier; executive producer: K2 Communications. Release: fall 2016.

Predators
BBC Earth, Silverback Productions; distributor: BBC Earth, Giant Screen Films; director, producer, writer: Alastair Fothergill; DP: Jamie McPherson; executive producer: Neil Nightingale. Release: December 2016.
– Post-production is under way.

Extreme Weather
National Geographic Studios; distributor: National Geographic Studios; director, producer: Sean Casey; script: Mose Richards; executive producer: Brooke Runnette. Release: late 2016.

Amazing Mighty Micro Monsters (wt)
Colossus Productions, Atlantic Productions; distributor: Atlantic Productions; producer: Anthony Geffen. Release: 2016.
– Post-production is under way.

In Saturn's Rings
SV2 Studios; distributor: BIG & Digital; director, producer, writer, executive producer: Stephen van Vuuren. 2D. Release: 2016.
– **Rendering for the opening section, originally expected to take 3–6 months, will take 2.5–3 years.**

Secrets of the Royal Garden
Atlantic Productions; distributor: tba; director: Martin Williams; producer: Anthony Geffen; script: David Attenborough; DP: Tim Cragg; score: Joel Douek; executive producer: Anthony Geffen. Shot in 4K. Cast: David Attenborough. Release: 2016.

Soar
RPG Productions, Soaring the West, Inc.; distributor: tba; director: Matthew Murray; script: Matthew Murray, Mike Abernathy; executive producers: Rick Gordon, Matthew Murray, Mike Abernathy 2D. Release: tba.

Threads of India
CMI Productions; distributor: Cross Media International. 2D. Release: 2016.

Wild Flight 3D
Colossus Productions, Atlantic Productions; distributor: Atlantic Productions; director: David Lee; producer: Anthony Geffen; writer: David Attenborough; DPs: Paul Williams, Peter Parks, Chris Parks; executive producer: Anthony Geffen. Release: 2016.
- Principal photography is complete. Post-production is under way.

Dream Big: Engineering Wonders of the World (wt)
MacGillivray Freeman Films; distributor: MacGillivray Freeman Films; director: Stephen Judson; producer: Shaun MacGillivray; DPs: Brad Ohlund, Greg MacGillivray, Ron Goodman; script: Stephen Judson; score: Steve Wood. Release: February 2017.

Train Time (wt)
Stephen Low Company; distributor: Stephen Low Company; director: Stephen Low; producer: Pietro Serapiglia. 2D. Release: February 2017.

Icarus' Revenge (formerly *Solar Impulse 3D)*
N3D Land Films; distributor: tba; directors: Pascal Vuong, Ronan Chapalain; producers: Catherine Vuong, Pascal Vuong; script: Pascal Vuong; score: Franck Marchal; executive producers: Catherine Vuong, Pascal Vuong. Cast: Bertrand Piccard, André Borschberg. Release: March 2017.
- **December: Scouting in Hawaii.**
- March 2016: Filming in Hawaii.
- April 2016: The flight around the world is expected to continue.

Sea of Love
Achtel Pty. Ltd.; distributor: tba; director: Pawel Achtel; producers: Pawel Achtel, Paul Willey; DPs: Pawel Achtel, Yifan Wang; script: Jan Aldenhoven, Yunan Cao; executive producers: Buting Yang, Yan Zhao. Release: late 2017.
- November: Shot on Great Barrier Reef and Far North Coral Sea.

Return to Everest
MacGillivray Freeman Films; distributor: MacGillivray Freeman Films; director: Greg MacGillivray; producer: Shaun MacGillivray; script: Stephen Judson; DPs: Brad Ohlund, Michael Brown, Greg MacGillivray, Jack Tankard, Ron Goodman; score: Steve Wood. Cast: Jamling Norgay, Araceli Segarra. Release: May 2018.

Photo by Richard Cook, © 2015 by John Downer Productions.

Christian Moullec and Richard Cook flying in a microlight with common cranes over Venice, Italy, for Earthflight *from BBC Earth and Giant Screen Films.*

*(from **IMMERSIVE** on page 1)*
cinematic experiences is nothing new, dating back to the original stereoscopic 3D experiments in the 1930s, and with the brief rise in the 1950s of the **Cinerama** theatrical format — an amazingly complicated endeavor for its day.

"That technology had a curved, semi-ellipsoidal screen, and it worked by using three synchronized film projectors," he says. "There was also a separate sound system, which was one of the first surround sound implementations. So somebody sitting in that auditorium would see a very wide horizontal field of view filling his or her peripheral vision from left to right, creating a highly immersive visual experience, coupled with immersive sound. It was very complicated, because it had to be shot with three synchronized cameras and projected with three synchronized projectors, and it needed a crew of six people in the theater to operate the system. They also had technical challenges with keeping the three projectors at the same brightness, synchronized, and blended so the edges were not visible. "

Today, similar principles are back with a handful of innovative developments applied to the digital landscape, according to Ludé. Among these developments is the **Barco Escape** system, which debuted a little over a year ago. Ludé suggests that system does offer a somewhat similar experience as Cinerama, and exemplifies the notion that the movie industry is now clearly considering immersive visuals.

"The idea is somewhat similar to Cinerama in that they are using three screens side-by-side, with the two side screens at oblique angles, about 100 degrees off the center screen, and one digital cinema projector imaging each screen.

"Of course, nowadays, with digital technology, it is far easier to create the content and to synchronize and balance and operate such systems, so it is much more practical than it was in the 1950s. The idea is not something that has been widely accepted yet, but it has certainly been experimented with, and that is notable in itself. And it definitely is immersive — the idea is that you are greatly increasing the horizontal field of view."

Indeed, Ludé makes the point that such presentations are built around the notion of pumping more visual information into the viewer's peripheral vision, which "responds differently, neurologically, than your central vision. The eye is concentrating ahead, and that is where you see fine detail. But on the sides of your field of vision, you get more of a subconscious feeling that you are actually in the environment, and you are much more sensitive to motion cues in your peripheral vision. Right now, filmmakers are experimenting with how to use this wide field of view, but there is no right or wrong answer. It's really an artistic language that needs to be explored."

Ludé says the idea of such systems is to present a single image, even though multiple screens are required to achieve the illusion. "The purpose is to be immersing the user by erasing the screen edges," he emphasizes. "That's why the term 'multi-screen' doesn't do it justice. You are really seaming together three projectors, but that is just an implementation detail of today's technology. Over time, there will likely be other display technologies in the theater. **Imax Corporation** is already using a pair of high-luminance, 4K projectors [as part of a new system known as IMAX with Laser] to fill up to a 100-degree horizontal field of view."

He adds that other approaches are raising interest as well. One of them, dubbed **Screen X**, comes from the Korean conglomerate **CJ Entertainment**, and has been installed into a couple hundred theaters worldwide, mostly in Asia. It provides a primary image focused on the main, central screen in an auditorium, and projects specially authored and color-timed supplemental images on the side walls.

"Screen X uses a bank of projectors on the side walls, with proprietary image stitching to create one seamless projection. Multiple projectors near the ceiling on the left wall project onto the right wall, and vice versa. "So far, they have not used this approach so much for full-length movies, but primarily for creating a memorable surround experience for the pre-show material. I know they have been working on a couple of Korean feature film titles, so it will be interesting to see how this technology develops."

Providing multiple screen configurations designed to offer the viewer an immersive cinematic experience inside an actual movie theater, however, is not the only development under the broader heading of a "multi-view environment." Attempts to combine the cinematic experience, either literally or figuratively, with the virtual reality experience are also under way, according to Ludé.

Some of these attempts involve gear already on the market, while others involve early experiments and theories that are now filtering into the industry consciousness, he adds. "There is some general discussion about combining augmented reality [AR] headgear with a conventional display," he says. "For example, a television or a projected image in a movie theater might be supplemented through additional images rendered in AR eyewear."

"The concept is that you could watch a standard movie, but when viewed through your AR glasses, you would see additional characters or ghosts or sub-titles, or whatever else the content creator came up with to supplement the main image. As you move your head around, the virtually augmented images would remain totally fixed in relationship to the main screen."

More than theoretical, however, is an application with today's most well-known, high-end virtual reality consumer technology, Oculus Rift, called Oculus Cinema. That application, Ludé points out, is not multi-screen in nature at all, but rather simulates the concept of being in an immersive cinematic environment by using the VR headset's strengths to place the user into a familiar setting — a movie theater — where the viewer can watch an actual movie they have downloaded or are streaming, bringing the cinema experience to the at-home experience, so to speak.

"And if that is not confusing enough, they are also turning the tables by building out immersive environments from existing standard cinematic movies for virtual reality experiences connected to those movies," he adds. "This was done [late last year] by [**Fox Searchlight** and partners] for the **Reese Witherspoon** film, *Wild*, in which they created a short immersive experience based on the main protagonist in the film

joining you, the viewer, in the virtual world [based on an environment in the movie]. That is an example of filmmakers leveraging scripted cinematic stories we are used to seeing on the big screen, and making them into more interactive experiences using virtual reality eyewear. One can argue that is totally different than cinema, and not multi-screen, and not a movie theater, but it is movie content re-authored to be an interactive, virtual experience."

Such developments are requiring content creators to think about new or additional ways of mastering their content, and how to render it into new VR platforms. Ludé points out that eventually such work will likely force new post-production requirements upon filmmakers that go beyond what the Interoperable Mastering Format (IMF) was designed for. And the use of new 360-degree, immersive camera systems on sets, such as technology now being used by some productions like the Jaunt One, the Lytro Immerge, or simpler systems now available from companies like Nokia, GoPro, and others, is likely to become more common.

Ludé says what makes these developments potentially germane to so-called multi-screen cinematic experiences potentially is the fact that they could, in the near future, be used for capturing imagery more conducive to content for systems like Escape or Screen X, among others.

"A lot of this work in immersive image capture is currently driven toward virtual reality headsets, but there is nothing to say they couldn't also go into an Escape or a Screen X, or some future Cinerama-type surround theater, where you might walk into the theater and, from floor to ceiling, experience screens all around you, or at least, 180 degrees around you," he suggests. "That could lead to eventually watching motion pictures in a way that is very novel and immersive."

And that possibility, in turn, has implications for the standards community, Ludé adds, simply because "the genie is out of the bottle. Research and development into these applications won't stop as long as content creators find them potentially compelling to audiences, and for luring new revenue."

"The good news is the fact that some of the standards are already out there, such as DCI System Specifications and the SMPTE 428 [series of standards for D-Cinema production and post], which could be leveraged to work with immersive imaging [in a cinema setting]," he says. "For example, to project three images, as Barco Escape does, you could leverage all existing SMPTE standards by synchronizing multiple media blocks off a common standardized protocol. In that scenario, there are three images going to three projectors and immersive sound, all synchronized under existing SMPTE standards.

"However, if I am trying to author one large image that wraps all the way around you spherically, those technologies are generally proprietary right now. There are quite a few computer scientists now working to develop improved algorithms for stitching images together, and for re-warping geometry needed for immersive displays. I would expect that, eventually, the question of how you distribute this immersive content, and how you render it to preserve frame rate and color gamut, how you map the image into different display geometries, and many other attributes, will need to be standardized."

Real D's Peter Ludé.

Ludé adds, "We are now in an exciting time in the development of new display technology, based on both advancements in computational imaging and photonics." Such advancement, he says, is also enabling display eyewear using light-field technology. He points to a recent demo presented to the industry by a Florida-based company called Magic Leap that purports to delve into this area. Such applications, however, require "substantial computational power, and continued developments in computer science, as well as optical technology to reconstruct such images and project them into your retina appropriately," he states.

In any case, the introduction of the VR/AR industry's nascent, but powerfully intriguing, capabilities into the multi-screen immersion experience is bound to get "quite messy" when it comes to making all the different cameras, platforms, and corresponding technologies interoperable any time soon, Ludé suggests.

"Yes, we will somehow be able to port some of these [personal and VR-style] devices [into the cinema world], and we will probably need new devices, as well, but you will find a certain degree of incompatibility for a long time as a result," he says. "In the cinema world, things are typically much more controlled. Only a few people author the content, and even then, they do it in tightly controlled windows. They have specific creative intent for how they want everything to look and feel. By contrast, I expect that for VR headsets, the very idea of content will be an entirely separate world, at least partially driven by user-generated content forging exciting new applications. VR content contains a whole lot more data, and therefore, it has to be rendered and encoded in a very different fashion [from cinematic data]. I expect it is likely you will find both types of content on [streaming services], with one version designed specifically for your headset, and a different version for your home theater. The result, I think, will be an entirely different flavor of content with increasingly more segmentation."

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*(from **SHORTS** on page 24)*

taining the 70mm equipment and projectionists qualified to run it, suggesting that the actual number may be lower. As this issue went to press, no official list of 70mm venues had yet been released.

Imax to open gym in NYC

A subsidiary of **Imax Corporation** has applied for permission to open a gym in the New York borough of Brooklyn. **IMAX Fit, LLC**, reportedly plans to equip the first floor of 135 Plymouth St., in the shadow of the Manhattan Bridge, with tiered rows of stationary bikes facing an IMAX screen playing scenes of nature, accompanied by ambient sounds, intended to give the impression that the customers are riding outside.

Web site DNAinfo.com reported that "[Imax's] chief business development officer, **Rob Lister**, said the new venture is still in the preliminary testing phase and that the company is working on creating high-energy videos and music that would play during the classes. He said if the company goes ahead with the plans, the... location would be the first of its kind in the country."

A sub-committee has approved the application, and the full board is expected to approve it this month. It will then face further regulatory review early next year.

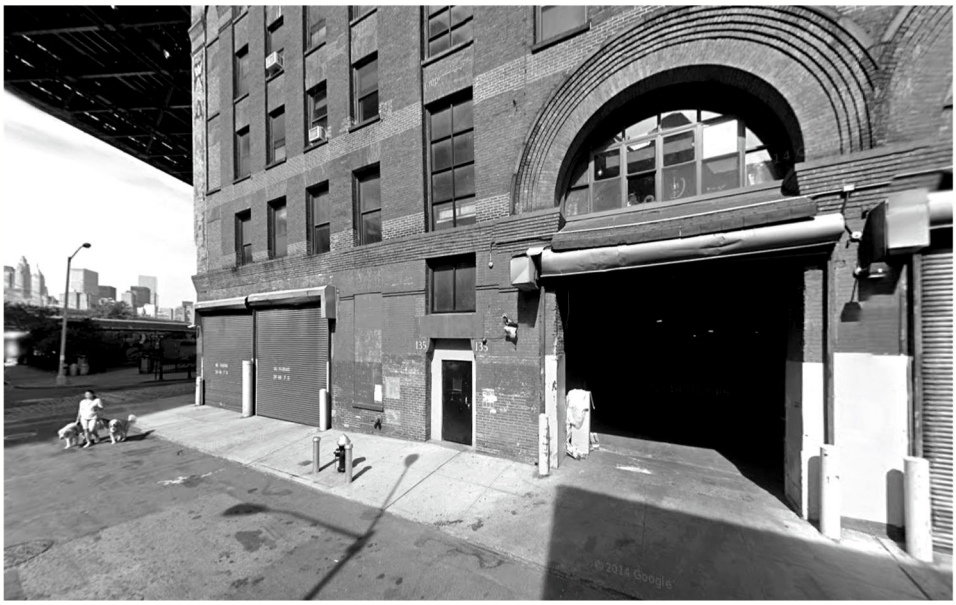
80 home IMAXes signed in China

Imax Corporation has signed agreements for more than 80 IMAX Private Theatre Palais systems since opening its first showroom in China in June. According to a press release, "the majority of the total systems signed to date comprise agreements with high-end luxury property developers in China." The Palais system, with a price tag starting around $250,000, is "the very first completely integrated home theatre system from a single holistic IMAX design and source. Features include sound isolation, acoustics, wall treatments, flooring, lighting, seating, and specialized, high-quality and unique audio-visual content provided by Imax."

The company is planning to add new showrooms in Beijing, London, Los Angeles, New York, and Dubai in the coming months.

Mansion with IMAX: $159M

The highest-priced property currently for sale in the U.S. is a 60,000-square-foot (5,600-square-meter) ocean-front mansion in Florida that includes an IMAX home theater, a go-cart track, an ice rink, and a bowling alley. Known as the Palais Royal, it is located in Hillsboro Beach, about ten miles north of Fort Lauderdale, and has an asking price of $159 million, up from $139 million last year, before the latest amenities were added.



Photographed in October 2013, this Brooklyn, NY, building may house the first IMAX Fit location.

© Google Maps.

Worldwide GS and IMAX Theaters

As of Dec. 1, 2015

Note: To avoid double counting, theaters with digital and 15/70 systems are shown as 15/70 only.

C = Commercial Standalone CT = Theme Park
CM = Multiplex I = Institutional

By Format and Operator Type

		C	CM	CT	I	Total
Africa	D		6			6
	8/70				1	
	10/70				1	1
	15/70					
	Total		6		2	8
Asia/Pac	D		275	1	23	299
	8/70	1			8	9
	10/70				7	7
	15/70	1	4	1	26	32
	Total	2	279	2	64	347
Europe	D	2	112	2	5	121
	8/70	1		1	3	5
	15/70	5	2	5	8	20
	Total	8	114	8	16	146
Middle East	D		12			12
	8/70					
	15/70				2	2
	Total		12		2	14
North America	D	5	330	1	46	382
	8/70	3			9	12
	15/70	7	39		60	103
	Total	15	369	1	115	500
South America	D	1	20		1	22
	8/70				1	1
	15/70	1				1
	Total	2	20		2	24
World	D	8	755	4	75	842
	8/70	5		1	22	28
	10/70				8	8
	15/70	14	45	6	96	161
	Total	27	800	11	201	1,039

By 2D / 3D

	2D	3D	Total
Africa	2	6	8
Asia/Pac	51	296	347
Europe	17	129	146
ME	1	13	14
NA	68	432	500
SA	1	23	24
Total	140	899	1,039

By Screen

	Dome	Flat	Comb	Total
Africa	2	6		8
Asia/Pac	46	301		347
Europe	13	133		146
ME	1	13		14
NA	47	451	2	500
SA	2	22		24
Total	111	926	2	1,039

Bookings: December 2015 by Film

549 bookings of 79 films in 170 theaters

These listings to not include Hollywood films shown in multiplex IMAX theaters. Those films are listed when they are shown in non-multiplex theaters, and conversely, non-Hollywood giant-screen films showing on multiplex IMAX screens are also listed.

Listings shown in **bold face** below are new or updated listings. The rest are unchanged from the previous month's issue.

The data on the following pages are ***not*** warranted to be comprehensive or accurate in every detail, despite our best efforts to make them so. They have been compiled from theater surveys, distributors, the Web, and other sources.

We will make every effort to improve the thoroughness, and accuracy of these data. If your theater or film is not shown here, please get in touch with us to update our listings.

Where a date is not shown, it means that no date was provided by the source or, in the case of a closing date, that no date has been set, or that the run is indefinite.

The key to film abbreviations is on page 21.

Film	Theater	Open	Close
AirRacer	Davenport Put	10/20/15	12/31/15
	Hutchinson	1/1/15	12/31/15
	Louisville KSC	1/1/15	12/31/15
AIWC	**Chandigarh**	**9/5/14**	**9/4/16**
Alamo	San Antonio 2D AMC		
Amazon	Hartberg	3/25/15	12/31/15
	Shanghai 3D STM	**8/31/15**	**8/30/16**
Animalop	Detroit MSC		12/31/15
	Pittsburgh CSC	**1/1/10**	
APE	Taipei AM	4/1/15	4/1/16
Arabia3D	Boston MOS	7/10/15	12/31/15
Bugs	Columbus COSI	9/15/14	6/30/16
	Edmonton TWS	12/26/13	6/30/16
	London BFI	9/1/14	1/31/16
	Raleigh	7/5/14	6/30/16
	Vancouver TWS	3/11/06	6/30/16
CRA	**Athens Eug**		**12/31/15**
	Fort Worth	1/5/15	5/27/16
	Hartberg	3/25/15	12/31/15
	Pittsburgh CSC	10/1/15	7/1/16
CV	Alexandria BA	10/1/13	12/31/16
	Alexandria BA		**12/31/16**
D-Day	Branson	10/9/15	12/15/15
	Chantilly		12/31/15
	Cincinnati MC	5/15/15	
	Cleveland	5/8/15	5/22/16
	Columbus GA NIM	5/23/14	5/31/16
	Davenport Put	5/22/15	
	Dearborn THF	**3/28/14**	**12/15**
	Erie	**11/7/15**	**7/7/16**
	Fort Worth	9/5/15	2/4/16
	Hague	**2/10/15**	**12/31/15**
	Hangzhou Bro	6/1/15	12/31/15
	Harrisburg	6/6/15	
	London BFI	5/8/15	
	Paris Geo	4/2/14	12/31/15
	Pensacola NAM	10/1/14	12/31/15
	Peoria RM	5/23/15	
	Phoenix ASC	5/22/15	
	Pittsburgh CSC	5/22/15	
	Poitiers Imax 3D	6/6/15	1/1/16
	Raleigh	5/23/14	1/30/16
	Regina	11/11/15	
	Tallahassee CLC	6/6/15	6/30/16
	Vancouver TWS	**11/11/15**	**11/10/16**
	Washington NASM	5/23/14	5/2/16
DIA	Hartberg	3/25/15	12/31/15
DinoAliv	Detroit MSC	10/17/15	10/31/16
	Port of Spain	**9/1/15**	**9/30/16**
	Portland OMSI	5/23/14	5/30/16
	Washington NMNH	5/15/15	5/31/16
Dolphins	Gatineau	7/17/15	12/31/16
	Hague	10/11/11	12/31/15
	Speyer Dome		**12/31/15**
DPTP	Killeen	5/12	5/16
	Louisville KSC	6/14	7/16
	Lubbock SS	1/14	12/15
	Sioux Falls	4/14	12/15
Dragons	Guayaquil	5/1/14	12/31/15
	Tijuana	7/17/15	1/16/16
	Victoria DCI	**5/1/15**	**5/31/16**
DSC	Denver MNS	12/12/14	12/14/15
	Erie	**6/6/15**	**6/5/16**
	Jersey City	1/16/15	1/15/16
	Lehi	1/16/15	1/15/16
	Milwaukee	**10/6/15**	**6/30/16**
	Orlando SC	1/16/15	1/15/16
	Parker	**9/26/15**	**3/25/16**
	Portland OMSI	1/16/15	1/15/16
	Quebec II	1/23/15	1/15/16
	Raleigh	1/16/15	1/15/16
	Saint Augustine	1/16/15	1/15/16
	Sioux Falls	**10/2/15**	**3/31/16**
	Virginia Beach AMSC	1/16/15	1/15/16
Everest	Baltimore MSC	9/15/15	9/14/16
	Copenhagen TBP	9/24/15	1/12/16
	Hague	5/8/15	5/9/16
	Hartberg	3/25/15	12/31/15
	Philadelphia FI	**9/15/15**	**12/31/15**
	Spokane RP	**4/1/15**	**9/30/16**
FightPil	Chantilly I	12/10/04	7/16
	Corpus Christi Lex	5/12/12	7/16
	Dayton	3/1/13	6/30/16
	Huntsville USSRC	7/1/13	7/1/16
	McMinnville	3/23/12	7/1/16
	Pensacola NAM	6/8/11	7/16
	Seattle PSC 2	6/14/13	6/14/16
FOTB	**Apple Valley Imx**	**6/5/15**	**2/26/16**
	Baton Rouge LASM	9/1/15	8/31/16
	Calgary TS	6/28/13	12/31/15
	Chattanooga TA	10/1/12	4/30/16
	Chicago MSI	2/28/14	6/30/16
	Cincinnati MC	2/14/13	6/30/16
	Cleveland	11/27/13	6/30/16
	Columbus COSI	9/1/14	6/30/16
	Davenport Put	2/15/13	6/30/16
	Dearborn THF	2/18/13	12/17/15
	Edmonton TWS	12/26/13	6/30/16
	Gatineau	10/5/12	6/30/16
	Hampton VASC	3/29/13	6/30/16
	Hastings	3/17/13	6/30/16
	Houston MNS	**10/4/12**	**1/31/16**
	London SM	9/6/13	1/31/16
	Louisville KSC	9/30/12	6/30/16
	Memphis Pink	3/1/14	5/23/16
	Norwalk MA	5/22/15	10/7/16
	Orlando SC	3/1/14	6/30/16
	Pittsburgh CSC	3/15/13	6/30/16
	Portland OMSI	1/7/15	6/30/16
	Raleigh	10/19/12	6/30/16
	Sacramento Imx	8/13/13	6/30/16
	Saint Augustine	1/18/13	12/31/15
	San Antonio 3D AMC	5/15/15	5/14/16
	San Diego RHF	10/12/12	9/30/16
	San Jose Tech	2/9/13	6/30/16
	Syracuse MOST	7/4/15	7/3/16
	Taichung NMNS	7/1/15	6/30/16
	Tallahassee CLC	1/18/13	6/30/16
	Valencia Spn	7/1/15	6/30/16
	Vancouver TWS	6/16/13	6/30/16
	Victoria DCI	4/5/13	6/30/16
	Washington NMNH	10/5/12	1/13/17
G3DNW	Al Khobar	8/20/15	8/21/16
	Apple Valley Imx	10/3/14	4/2/16
	Berlin CS	**4/20/14**	**10/9/16**
	Budapest CC	4/24/14	4/23/16
	Copenhagen TBP	2/8/14	2/7/16
	Davenport Put	**10/17/14**	**10/16/16**
	Denver MNS	8/1/15	7/31/16
	Gatineau	10/10/14	6/30/16
	Guayaquil	4/20/14	5/4/16
	Hartford CSC	11/27/15	4/10/16
	Hastings	2/10/15	2/14/16
	Houston MNS	2/15/14	12/31/15
	Indianapolis Imx	9/21/15	3/20/16
	Katowice CC	**6/18/14**	**9/19/16**
	Keelung NMMST	1/1/15	12/31/15
	Krakow CC	**6/18/14**	**9/19/16**
	Kuwait SCK	**10/3/14**	**4/2/16**
	Lodz CC	**6/18/14**	**9/19/16**
	Louisville KSC	6/18/15	6/17/16
	Lucerne	6/5/14	6/4/16
	Mexico City Pap	3/27/15	3/26/16
	Moscow BFC	10/6/14	10/31/16
	Nagasaki SM	**8/1/15**	**3/31/16**
	New Orleans	5/22/15	2/1/16
	Nuremberg	**10/15/14**	**5/19/16**
	Omaha Zoo	8/1/15	6/30/16
	Orlando SC	7/5/14	1/4/16
	Poznan CC	**6/18/14**	**9/19/16**
	Prague CC	5/22/14	5/21/16
	Saint Augustine	4/1/15	3/31/16
	Seattle PSC 2	**11/20/15**	**4/30/16**
	Shanghai Dome STM	12/31/14	12/30/15
	Victoria DCI	9/14/15	1/21/16
	Warsaw CC	**6/18/14**	**9/19/16**
GC	Grand Canyon DCI	11/1/99	12/15
GCA	Gatineau	5/1/13	3/31/16
	Harrisburg	11/1/14	12/31/15
	Mexicali	5/21/15	5/20/16
	Monterrey Pap	11/1/15	2/28/16
	Shanghai 3D STM		**12/31/15**
	Sinsheim	**10/31/09**	**12/31/15**
	Syracuse MOST	4/4/15	4/3/16
GreatApe	**Orlando SC**	**4/3/15**	**1/31/16**
Greece	Baltimore MSC	9/15/15	9/14/16
	Gatineau		12/31/16
GWS	Birmingham AL	2/13/15	2/29/16
	Boston NEA	5/31/13	2/29/16
	Charlotte DP	5/9/15	5/31/16
	Davenport Put	1/28/15	1/31/16
	Des Moines	6/6/14	12/31/15
	Galveston	6/28/14	12/31/16
	Mexicali	6/26/15	3/31/16
	New Orleans	10/6/15	6/30/16
	Richmond SMV	3/15/14	3/15/16
	Sacramento Imx	2/20/15	2/29/16
	Saint Augustine	8/9/13	9/8/16
	Saint Paul SMM	2/20/15	2/29/16
	Seattle PSC 1	9/19/14	9/19/16
	Sioux Falls	1/30/15	6/30/16
	Tallahassee CLC	6/15/13	6/30/16
	Victoria DCI	2/13/15	2/29/16
	Virginia Beach AMSC	5/29/14	6/30/16
HCBTD	San Simeon DCI	8/17/96	
HidUniv	**Athens Eug**	**3/20/15**	**12/31/15**
	Copenhagen TBP	**6/29/13**	**12/30/15**
	Glasgow	5/2/14	12/30/15
	Huntsville USSRC	**7/2/13**	**12/31/15**
	London SM	**10/18/13**	**12/31/15**
	Orlando SC	6/13/14	4/2/16
	Saint Augustine	1/5/15	1/4/16
	Taipei AM	**7/1/15**	**6/30/16**
	Tallahassee CLC	**2/14/14**	**12/31/15**
	Valencia Spn	4/1/14	6/30/16
	Washington NASM	**1/30/14**	**12/31/15**
Hubble3D	Washington NASM	1/15	12/15
HumpbWha	Atlanta FMNH	2/13/15	2/12/16
	Atlantic City	2/13/15	2/12/16
	Austin TSHM	2/13/15	2/12/16
	Baltimore MSC	7/1/15	6/30/16
	Berlin CS	5/1/15	4/30/16
	Boston MOS	2/13/15	2/12/16
	Boston NEA	2/13/15	2/12/16
	Chattanooga TA	3/6/15	3/6/16
	Chicago MSI	5/29/15	5/28/16
	Cincinnati MC	2/13/15	2/12/16
	Columbus COSI	6/1/15	3/10/16
	Copenhagen TBP	10/8/15	10/7/16
	Dearborn THF	2/13/15	6/13/16
	Denver MNS	6/5/15	6/4/16
	Detroit MSC	2/13/15	2/12/16
	Edmonton TWS	10/2/15	10/1/16
	Fort Lauderdale	2/13/15	2/12/16
	Fort Worth	3/6/15	3/5/16
	Galveston	5/23/15	5/22/16
	Houston MNS	3/13/15	3/12/16
	Jersey City	2/13/15	2/12/16
	Los Angeles CSC	7/3/15	7/2/16
	Lubbock SS	2/13/15	2/12/16
	Memphis Pink	3/7/15	3/7/16
	New Orleans	3/6/15	3/5/16
	Norwalk MA	2/13/15	5/12/16
	Nuremberg	4/30/15	4/29/16
	Omaha Zoo	3/15/15	2/28/16
	Orlando SC	2/13/15	2/12/16
	Paris Geo	7/7/15	7/6/16
	Philadelphia FI	6/20/15	6/19/16
	Port of Spain	3/12/15	3/11/16
	Raleigh	3/20/15	4/23/16
	Regina	**11/20/15**	**11/19/16**

Film	Theater	Open	Close
	Richmond SMV	3/14/15	2/12/16
	Saint Augustine	2/13/15	2/12/16
	Saint Louis SC	2/13/15	2/12/16
	Saint Paul SMM	10/9/15	10/8/16
	Salt Lake City Clark	2/13/15	2/12/16
	San Diego RHF	2/13/15	2/12/16
	San Jose Tech	2/13/15	2/12/16
	Seattle PSC 2	4/27/15	5/15/16
	Sinsheim	5/21/15	5/20/16
	Sudbury	9/24/15	10/6/16
	Sydney WBS	4/23/15	4/2/16
	Tallahassee CLC	2/20/15	2/20/16
	Toronto OSC	5/15/15	5/14/16
	Vancouver TWS	10/9/15	10/8/16
	Victoria DCI	6/19/15	6/18/16
	Virginia Beach AMSC	9/8/15	9/7/16
IOLM	Raleigh	4/4/14	
	Salt Lake City Clark	4/4/14	4/29/16
Jerusale	Albuquerque NMMNH	4/11/14	12/31/15
	Atlanta FMNH	**1/3/14**	**3/5/16**
	Columbus COSI	2/11/15	2/10/16
	Des Moines	**7/1/15**	**6/30/16**
	Detroit MSC	**11/3/15**	**1/3/16**
	Edmonton TWS	12/26/13	12/31/15
	Galveston	**11/12/15**	**1/10/16**
	Hague	**3/31/14**	**6/30/16**
	Harrisburg	**10/18/14**	**10/31/16**
	Huntsville USSRC	1/17/15	1/16/16
	Louisville KSC	1/20/14	1/18/16
	Lucerne	**7/1/15**	**6/30/16**
	Milwaukee	**10/9/15**	**6/30/16**
	New Orleans	**11/19/15**	**1/19/16**
	Peoria RM	**11/14/15**	**11/13/16**
	Philadelphia FI	1/5/15	1/1/16
	Pittsburgh CSC	**3/7/14**	**12/31/16**
	Portland OMSI	**11/18/13**	**11/20/16**
	Saint Louis SC	**10/4/13**	**6/3/16**
	Salt Lake City Clark	11/20/15	12/31/15
	San Diego RHF	**11/20/15**	**10/31/16**
	San Jose Tech	3/27/15	6/30/16
	Tallahassee CLC	**11/15/14**	**11/27/16**
	Tijuana	**4/1/15**	**3/14/16**
JIAC	**Alamogordo**		**1/31/16**
	Baltimore MSC	9/15/15	9/14/16
	Gatineau	7/17/15	12/31/16
JMCSO	Albuquerque NMMNH	5/23/15	5/22/16
	Atlanta FMNH	**6/13/15**	**12/31/15**
	Boston NEA	4/16/15	4/16/16
	Cleveland	**6/16/15**	**1/31/16**
	Columbus COSI	9/25/15	5/30/16
	Copenhagen TBP	6/25/15	6/25/16
	Dearborn THF	2/27/15	12/31/15
	Denver MNS	8/14/15	8/14/16
	Galveston	3/6/15	3/6/17
	Gatineau	9/4/15	9/30/16
	Houston MNS	5/22/15	5/22/16
	Kuwait SCK	**7/17/15**	**6/15/16**
	Lehi	8/7/15	4/7/16
	Milwaukee	**6/12/15**	**12/12/15**
	Montreal SC	4/3/15	12/31/15
	New York AMNH	7/31/15	1/6/16
	Portland OMSI	**2/20/15**	**2/20/16**
	Puebla	4/23/15	4/26/16
	San Diego RHF	**7/1/15**	**1/3/16**
	Tallahassee CLC	8/14/15	8/14/16
	Virginia Beach AMSC	6/16/15	6/13/16
	Washington NMNH	**3/20/15**	**3/20/17**
JTM	Edmonton TWS	12/26/13	6/30/16
	London BFI		1/31/16
JTS	Birmingham AL	2/13/15	3/15/16
	Chantilly	5/1/15	5/1/16
	Charlotte DP	9/19/15	9/19/16
	Chicago MSI	3/19/15	2/16/16
	Cincinnati MC	10/9/15	10/9/16
	Copenhagen TBP	**3/26/15**	**6/22/16**
	Corpus Christi Lex	5/22/15	5/31/16
	Davenport Put	1/31/15	2/21/16
	Dayton	3/6/15	3/5/16
	Denver MNS	8/14/15	8/14/16
	Des Moines	3/1/15	5/31/16
	Detroit MSC	6/13/15	2/12/16
	Hampton VASC	2/21/15	2/21/16
	Harrisburg	9/14/15	6/30/16
	Houston MNS	10/1/15	10/1/16
	Houston SCH	3/14/15	3/16/16
	Huntsville USSRC	2/13/15	2/17/16
	Hutchinson	2/20/15	2/16/16
	KSC 1	**2/27/15**	**3/6/17**
	Las Palmas	5/30/15	5/30/16
	Leon Exp	**12/1/15**	**5/31/16**
	Los Angeles CSC	**10/29/15**	**9/1/16**
	Louisville KSC	**4/3/15**	**3/31/16**
	Melbourne MV	3/12/15	6/30/16
	New Orleans	**11/19/15**	**11/19/16**
	Orlando SC	7/2/15	12/31/16
	Oulu	**11/2/15**	**5/1/16**
	Pensacola NAM	4/1/15	3/31/16
	Philadelphia FI	6/20/15	6/20/16
	Portland OMSI	3/20/15	3/20/16
	Saint Louis SC	3/13/15	3/16/16
	Salt Lake City Clark	**5/15/15**	**5/31/16**
	San Diego RHF	3/27/15	
	Tampa MOSI	5/22/15	5/21/16
	Victoria DCI	2/13/15	2/13/16
	Washington NASM	3/6/15	
JTTSP	Fort Worth	12/26/14	12/25/15
	Hague	**7/1/14**	**6/30/16**
	Leon Exp	**6/1/15**	**12/31/15**
	Paris Geo	**5/16/14**	**12/31/15**
	Shreveport	**10/3/14**	**1/3/16**
	Spokane RP	5/24/15	9/30/16
	Stockholm	2/14/14	12/31/15
Kenya	Kuwait SCK	9/22/15	3/22/16
	Lucerne	1/1/15	12/31/15
	Mexico City Pap	11/13/15	6/1/16
	Parker	12/7/14	12/31/15
LastReef	Berlin CS	7/5/13	12/31/15
	Chongqing STM	9/8/15	9/10/16
	Hutchinson	10/5/12	9/30/16
	Louisville KSC	2/8/14	6/30/16
	Salt Lake City Clark	10/9/15	8/31/16
	Sioux Falls	1/30/15	6/30/16
	Tallahassee CLC	1/17/14	6/30/16
LBC	Salt Lake City Clark	11/20/15	12/31/15
LITAOA	**Austin Reg**	**4/10/15**	**4/9/16**
	Chantilly	**5/1/15**	**4/9/16**
	Chicago Imx	**8/7/15**	**12/31/15**
	Columbus COSI	**10/14/15**	**10/13/16**
	Dayton	**9/8/15**	**9/4/16**
	Dearborn THF	**9/4/15**	**1/3/16**
	Des Moines	**6/5/15**	**6/4/16**
	Edmonton TWS	**6/12/15**	**6/11/16**
	Garden City	**4/10/15**	**4/9/16**
	Harrisburg	**7/22/15**	**7/9/16**
	Huntsville USSRC	**4/10/15**	**4/9/16**
	Lehi	**4/10/15**	**4/9/16**
	London BFI	**10/16/15**	**10/15/16**
	McMinnville	**4/10/15**	**4/9/16**
	Memphis Pink	**9/12/15**	**9/11/16**
	Mobile	**9/15/15**	**4/15/16**
	Montreal SC	**10/30/15**	**10/29/16**
	Orlando SC	**11/13/15**	**11/19/16**
	Pensacola NAM	**4/10/15**	**4/9/16**
	Sacramento Imx	**9/11/15**	**12/31/15**
	Saint Augustine	**8/19/15**	**8/18/16**
	Sudbury	**9/23/15**	**1/3/16**
	Washington NASM	**4/10/15**	**4/9/16**
LivingSe	Hartberg	10/1/13	12/31/15
	Rochester MSC	7/1/15	6/30/16
LOF	McMinnville	3/23/12	6/15/16
MOF	Pensacola NAM	11/8/96	
	Speyer Dome	**1/1/15**	**12/31/15**
MOTN	Alexandria BA	10/1/13	12/31/15
	Cairo EMA	**12/15/15**	**12/14/16**
	Lucerne	2/3/15	12/31/15
	Pittsburgh CSC		**12/31/16**
MOTUW	**Bradford**	**4/12/14**	**12/31/15**
	Calgary TS	**7/1/14**	
	Charlotte DP	2/8/15	1/31/16
	Cleveland	2/1/15	1/31/16
	Detroit MSC	**10/7/15**	**10/6/16**
	Guayaquil	**4/1/15**	**3/31/16**
	Hague	**10/1/15**	**9/16**
	Hampton VASC	**9/18/15**	**9/17/16**
	Hastings	**6/3/14**	**12/31/15**
	Kuwait SCK	**1/30/14**	**1/31/16**
	Lubbock SS	**9/18/15**	**9/17/16**
	Mexicali	**11/20/15**	**5/31/16**
	Montreal SC	**9/18/15**	**9/17/16**
	Peoria RM	1/17/15	1/16/16
	Raleigh	**11/1/15**	**12/31/16**
	Stockholm	**9/18/15**	**9/1/16**
	Taichung NMNS	**7/1/15**	**6/30/16**
	Tijuana	**2/13/15**	**1/31/16**
	Valencia Spn	**7/1/14**	**6/30/16**
	Victoria DCI	**10/9/15**	**10/8/16**
MTTM	Guayaquil	4/1/15	3/31/16
Mummies	San Diego RHF	6/1/14	12/31/15
	Sudbury	**3/7/15**	**3/6/16**
ND	New Delhi ICC		
Niagara	Niagara Can DCI	7/1/86	
	Niagara NY DCI	5/1/07	
OO	Birmingham AL	6/15/15	6/30/16
Ozarks	Branson	9/93	12/15
PTJH	Apple Valley Imx	2/20/15	2/18/16
	Bogota Mal	**5/22/15**	**5/21/16**
	Charlotte DP	**11/14/15**	**5/31/16**
	Chicago Imx	2/13/15	12/12/16
	Hague	**6/9/15**	**6/16**
	Harrisburg	**1/24/15**	**1/9/17**
	Hastings	**6/1/15**	**5/31/16**
	Hutchinson	**12/18/15**	**12/17/16**
	Kuwait SCK	**4/17/15**	**5/17/16**
	Lucerne	**9/18/14**	**6/30/16**
	Melbourne MV	**6/18/15**	**5/31/16**
	Montreal SC	12/22/14	12/21/15
	Singapore SC	**5/30/15**	**4/30/16**
	Tijuana	**10/17/15**	**10/16/16**
Pulse	Aguascalientes	4/30/15	12/31/15
RATW	Birmingham AL	6/15/15	6/30/16
Rescue	Al Khobar	6/6/13	12/14/15
	McMinnville	6/1/12	12/31/16
Rheged	Penrith	7/1/00	
RME	Beijing 3D CSTM	6/1/13	
	Birmingham AL	9/12	
	Cincinnati MC	1/1/15	12/31/15
	Dearborn THF	10/2/14	
	Gatineau	5/6/13	
	Lucerne	10/4/12	12/31/15
	Melbourne MV	3/26/15	3/26/16
	Pittsburgh CSC	11/26/14	11/25/16
	Saint Louis SC	6/1/13	
	San Jose Tech	10/1/13	
	Seattle PSC 2	10/14/11	
	Victoria DCI	6/28/13	
RobotsNG	**Albuquerque NMMNH**	**9/5/15**	**9/4/16**
	Bradford	**9/4/15**	**12/31/16**
	Cleveland	**11/1/15**	**10/1/16**
	Davenport Put	**11/1/15**	**10/31/16**
	Fort Worth	**6/5/15**	**6/4/16**
	Hampton VASC	**6/20/15**	**6/19/16**
	Houston MNS	**10/2/15**	**10/1/16**
	Huntsville USSRC	**6/5/15**	**6/4/16**
	Jersey City	**6/5/15**	**6/4/16**
	Kansas City Sci	**6/5/15**	**6/4/16**
	Kaohsiung NSTM	**7/1/15**	**12/31/15**
	Lehi	**6/5/15**	**6/4/16**
	London SM	**5/23/15**	**5/22/16**
	Lubbock SS	**6/19/15**	**6/18/16**
	McMinnville	**11/6/15**	**3/8/16**
	Orlando SC	**6/13/15**	**6/4/16**
	Pittsburgh CSC	**9/4/15**	**9/3/16**
	Saint Louis SC	**6/5/15**	**6/4/16**
	San Jose Tech	**10/3/15**	**10/2/16**
	Shanghai 3D STM	**7/1/15**	**6/30/16**
	Tallahassee CLC	**10/16/15**	**10/15/16**
SeaRex	**Penrith**	**9/7/15**	**8/1/16**
	Shanghai 3D STM	**1/4/15**	**3/31/16**
SpaceNex	**Columbus GA NIM**	**12/4/15**	**12/31/16**
	Copenhagen TBP	**12/17/15**	**9/15/16**
SpacJunk	Al Khobar	1/15/15	1/15/16
TA	Baltimore MSC	4/1/15	6/30/16
	Harrisburg	**10/8/14**	**6/30/16**
	Houston MNS	1/1/15	7/31/16
	Kansas City Sci	**9/25/15**	**5/31/16**
	Memphis Pink	3/8/14	6/30/16
	Sioux Falls	4/9/14	12/31/15
TinyGian	Albuquerque NMMNH	12/12/14	12/31/15
	Columbus COSI	3/1/15	9/30/16
	Davenport Put	9/25/15	9/25/16
	Denver MNS	12/12/14	12/31/15
	Erie	9/8/15	9/30/16
	Hastings	9/24/15	9/30/16
	Houston MNS	1/12/15	12/31/15
	Melbourne MV	9/17/15	9/30/16
	Parker	6/28/15	1/31/16
	Raleigh	9/19/15	9/30/16
	Seattle PSC 1	9/12/15	9/12/16
	Singapore DC	6/1/15	1/31/16
	Tallahassee CLC	12/12/14	12/31/15
ToFly	Washington NASM	7/1/76	
TOTIA	Branson	5/22/15	5/30/16
	Galveston	11/15/13	12/31/15
	Harrisburg	10/18/14	6/30/16
	Hastings	2/1/13	6/30/16
	Houston MNS	1/22/13	7/31/16
	Hutchinson	3/1/13	6/30/16
	Kuwait SCK	11/18/14	1/6/16
	Louisville KSC	11/28/13	6/30/16
	Melbourne MV	6/7/13	3/31/16
	Phoenix ASC	8/20/15	8/31/16
	Pittsburgh CSC	1/1/15	1/31/16
	Saint Félicien	5/1/14	5/31/16
	Sioux Falls	**6/30/15**	**6/30/16**
	Sudbury	2/1/15	2/29/16
TTA	Keelung NMMST	1/1/15	12/31/15
	Lucerne	5/8/15	12/31/15
	Paris Geo	10/6/15	1/31/16
	Regina	5/18/15	12/31/15
	Sinsheim	**5/1/15**	**12/31/15**
	Tallahassee CLC	10/21/14	12/31/15
VanGogh	Hague	9/1/15	12/1/15

Film	Theater	Open	Close
Vikings	**Gatineau**	**12/1/15**	**12/31/16**
Vulcania	Vulcania	2/22/02	
WATE	Katoomba	6/1/97	
WildAfri	**Albuquerque NMMNH**	**12/19/15**	**12/31/16**
	Boston MOS	11/20/15	11/30/16
	Fort Lauderdale	10/1/15	9/30/16
	Montreal SC	**12/18/15**	**12/31/16**
WildCats	**Lucerne**	**11/5/15**	**11/4/16**
WM	**Hastings**	**7/3/15**	**7/31/16**
	Louisville KSC	**2/8/14**	**12/31/15**
	Portland OMSI	**10/1/15**	**3/31/16**
	Seattle PSC 1	5/29/15	5/28/16
	Victoria DCI	**5/1/15**	**5/31/16**
WOTA	Al Khobar	6/1/15	6/30/16
	Atlanta FMNH	10/2/15	10/31/16
	Beijing CFM	3/1/15	3/1/16
	Gatineau	12/19/14	12/31/15
	Hutchinson	8/28/14	9/30/16
	Lubbock SS	11/13/15	11/30/16
WTTR3D	**Port of Spain**	**9/1/15**	**9/30/16**
WWDPP3D	Albuquerque NMMNH	3/31/15	3/31/16
	Bradford	9/16/15	9/30/16
	Columbus COSI	9/15/14	5/31/16
	Denver MNS	2/13/15	2/29/16
	Edmonton TWS	5/1/15	5/31/16
	Houston MNS	1/1/15	1/1/16
	Memphis Pink	5/21/15	6/30/16
	Peoria RM	2/1/15	5/31/16
	Philadelphia FI	7/1/14	12/31/15
	Portland OMSI	8/22/14	8/31/16
	San Diego NHM	12/1/14	12/31/15
	Sioux Falls	9/25/15	9/30/16
	Tallahassee CLC	4/1/15	4/30/16
	Virginia Beach AMSC	6/30/15	6/30/16
Yell	Yellowstone	5/1/14	12/31/16
ZionCany	Zion	7/1/08	

December 2015 by Theater

Theater	Film	Open	Close
Aguascalientes	Pulse	4/30/15	12/31/15
Al Khobar	G3DNW	8/20/15	8/21/16
	Rescue	6/6/13	12/14/15
	SpacJunk	1/15/15	1/15/16
	WOTA	6/1/15	6/30/16
Alamogordo	**JIAC**		**1/31/16**
Albuquerque NMMNH	Jerusale	4/11/14	12/31/15
	JMCSO	5/23/15	5/22/16
	RobotsNG	**9/5/15**	**9/4/16**
	TinyGian	12/12/14	12/31/15
	WildAfri	**12/19/15**	**12/31/16**
	WWDPP3D	3/31/15	3/31/16
Alexandria BA	CV	10/1/13	12/31/16
	CV		**12/31/16**
	MOTN	10/1/13	12/31/15
Apple Valley Imx	**FOTB**	**6/5/15**	**2/26/16**
	G3DNW	10/3/14	4/2/16
	PTJH	2/20/15	2/18/16
Athens Eug	**CRA**		**12/31/15**
	HidUniv	**3/20/15**	**12/31/15**
Atlanta FMNH	HumpbWha	2/13/15	2/12/16
	Jerusale	**1/3/14**	**3/5/16**
	JMCSO	**6/13/15**	**12/31/15**
	WOTA	10/2/15	10/31/16
Atlantic City	HumpbWha	2/13/15	2/12/16
Austin Reg	**LITAOA**	**4/10/15**	**4/9/16**
Austin TSHM	HumpbWha	2/13/15	2/12/16
Baltimore MSC	Everest	9/15/15	9/14/16
	Greece	9/15/15	9/14/16
	HumpbWha	7/1/15	6/30/16
	JIAC	9/15/15	9/14/16
	TA	4/1/15	6/30/16
Baton Rouge LASM	FOTB	9/1/15	8/31/16
Beijing 3D CSTM	RME	6/1/13	
Beijing CFM	WOTA	3/1/15	3/1/16
Berlin CS	**G3DNW**	**4/20/14**	**10/9/16**
	HumpbWha	5/1/15	4/30/16
	LastReef	7/5/13	12/31/15
Birmingham AL	GWS	2/13/15	2/29/16
	JTS	2/13/15	3/15/16
	OO	6/15/15	6/30/16
	RATW	6/15/15	6/30/16
	RME	9/12	
Bogota Mal	**PTJH**	**5/22/15**	**5/21/16**
Boston MOS	Arabia3D	7/10/15	12/31/15
	HumpbWha	2/13/15	2/12/16
	WildAfri	11/20/15	11/30/16
Boston NEA	GWS	5/31/13	2/29/16
	HumpbWha	2/13/15	2/12/16
	JMCSO	4/16/15	4/16/16
Bradford	**MOTUW**	**4/12/14**	**12/31/15**
	RobotsNG	**9/4/15**	**12/31/16**
	WWDPP3D	9/16/15	9/30/16
Branson	D-Day	10/9/15	12/15/15
	Ozarks	9/93	12/15
	TOTIA	5/22/15	5/30/16
Budapest CC	G3DNW	4/24/14	4/23/16
Cairo EMA	**MOTN**	**12/15/15**	**12/14/16**
Calgary TS	FOTB	6/28/13	12/31/15
	MOTUW	**7/1/14**	
Chandigarh	**AIWC**	**9/5/14**	**9/4/16**
Chantilly	D-Day		12/31/15
	JTS	5/1/15	5/1/16
	LITAOA	**5/1/15**	**4/9/16**
Chantilly I	FightPil	12/10/04	7/16
Charlotte DP	GWS	5/9/15	5/31/16
	JTS	9/19/15	9/19/16
	MOTUW	2/8/15	1/31/16
	PTJH	**11/14/15**	**5/31/16**
Chattanooga TA	FOTB	10/1/12	4/30/16
	HumpbWha	3/6/15	3/6/16
Chicago Imx	**LITAOA**	**8/7/15**	**12/31/15**
	PTJH	2/13/15	12/12/16
Chicago MSI	FOTB	2/28/14	6/30/16
	HumpbWha	5/29/15	5/28/16
	JTS	3/19/15	2/16/16
Chongqing STM	LastReef	9/8/15	9/10/16
Cincinnati MC	D-Day	5/15/15	
	FOTB	2/14/13	6/30/16
	HumpbWha	2/13/15	2/12/16
	JTS	10/9/15	10/9/16
	RME	1/1/15	12/31/15
Cleveland	D-Day	5/8/15	5/22/16
	FOTB	11/27/13	6/30/16
	JMCSO	**6/16/15**	**1/31/16**
	MOTUW	2/1/15	1/31/16
	RobotsNG	**11/1/15**	**10/1/16**
Columbus COSI	Bugs	9/15/14	6/30/16
	FOTB	9/1/14	6/30/16
	HumpbWha	6/1/15	3/10/16
	Jerusale	2/11/15	2/10/16
	JMCSO	9/25/15	5/30/16
	LITAOA	**10/14/15**	**10/13/16**
	TinyGian	3/1/15	9/30/16
	WWDPP3D	9/15/14	5/31/16
Columbus GA NIM	D-Day	5/23/14	5/31/16
	SpaceNex	**12/4/15**	**12/31/16**
Copenhagen TBP	Everest	9/24/15	1/12/16
	G3DNW	2/8/14	2/7/16
	HidUniv	**6/29/13**	**12/30/15**
	HumpbWha	10/8/15	10/7/16
	JMCSO	6/25/15	6/25/16
	JTS	**3/26/15**	**6/22/16**
	SpaceNex	**12/17/15**	**9/15/16**
Corpus Christi Lex	FightPil	5/12/12	7/16
	JTS	5/22/15	5/31/16
Davenport Put	AirRacer	10/20/15	12/31/15
	D-Day	5/22/15	
	FOTB	2/15/13	6/30/16
	G3DNW	**10/17/14**	**10/16/16**
	GWS	1/28/15	1/31/16
	JTS	1/31/15	2/21/16
	RobotsNG	**11/1/15**	**10/31/16**
	TinyGian	9/25/15	9/25/16
Dayton	FightPil	3/1/13	6/30/16
	JTS	3/6/15	3/5/16
	LITAOA	**9/8/15**	**9/4/16**
Dearborn THF	**D-Day**	**3/28/14**	**12/15**
	FOTB	2/18/13	12/17/15
	HumpbWha	2/13/15	6/13/16
	JMCSO	2/27/15	12/31/15
	LITAOA	**9/4/15**	**1/3/16**
	RME	10/2/14	
Denver MNS	DSC	12/12/14	12/14/15
	G3DNW	8/1/15	7/31/16
	HumpbWha	6/5/15	6/4/16
	JMCSO	8/14/15	8/14/16
	JTS	8/14/15	8/14/16
	TinyGian	12/12/14	12/31/15
	WWDPP3D	2/13/15	2/29/16
Des Moines	GWS	6/6/14	12/31/15
	Jerusale	**7/1/15**	**6/30/16**
	JTS	3/1/15	5/31/16
	LITAOA	**6/5/15**	**6/4/16**
Detroit MSC	Animalop		12/31/15
	DinoAliv	10/17/15	10/31/16
	HumpbWha	2/13/15	2/12/16
	Jerusale	**11/3/15**	**1/3/16**
	JTS	6/13/15	2/12/16
	MOTUW	**10/7/15**	**10/6/16**
Edmonton TWS	Bugs	12/26/13	6/30/16
	FOTB	12/26/13	6/30/16
	HumpbWha	10/2/15	10/1/16
	Jerusale	12/26/13	12/31/15
	JTM	12/26/13	6/30/16
	LITAOA	**6/12/15**	**6/11/16**
	WWDPP3D	5/1/15	5/31/16
Erie	**D-Day**	**11/7/15**	**7/7/16**
	DSC	**6/6/15**	**6/5/16**
	TinyGian	9/8/15	9/30/16
Fort Lauderdale	HumpbWha	2/13/15	2/12/16
	WildAfri	10/1/15	9/30/16
Fort Worth	CRA	1/5/15	5/27/16
	D-Day	9/5/15	2/4/16
	HumpbWha	3/6/15	3/5/16
	JTTSP	12/26/14	12/25/15
	RobotsNG	**6/5/15**	**6/4/16**
Galveston	GWS	6/28/14	12/31/16
	HumpbWha	5/23/15	5/22/16
	Jerusale	**11/12/15**	**1/10/16**
	JMCSO	3/6/15	3/6/17
	TOTIA	11/15/13	12/31/15
Garden City	**LITAOA**	**4/10/15**	**4/9/16**
Gatineau	Dolphins	7/17/15	12/31/16
	FOTB	10/5/12	6/30/16
	G3DNW	10/10/14	6/30/16
	GCA	5/1/13	3/31/16
	Greece		12/31/16
	JIAC	7/17/15	12/31/16
	JMCSO	9/4/15	9/30/16
	RME	5/6/13	
	Vikings	**12/1/15**	**12/31/16**
	WOTA	12/19/14	12/31/15
Glasgow	HidUniv	5/2/14	12/30/15
Grand Canyon DCI	GC	11/1/99	12/15
Guayaquil	Dragons	5/1/14	12/31/15
	G3DNW	4/20/14	5/4/16
	MOTUW	**4/1/15**	**3/31/16**
	MTTM	4/1/15	3/31/16
Hague	**D-Day**	**2/10/15**	**12/31/15**
	Dolphins	10/11/11	12/31/15
	Everest	5/8/15	5/9/16
	Jerusale	**3/31/14**	**6/30/16**
	JTTSP	**7/1/14**	**6/30/16**
	MOTUW	**10/1/15**	**9/16**
	PTJH	**6/9/15**	**6/16**
	VanGogh	9/1/15	12/1/15
Hampton VASC	FOTB	3/29/13	6/30/16
	JTS	2/21/15	2/21/16
	MOTUW	**9/18/15**	**9/17/16**
	RobotsNG	**6/20/15**	**6/19/16**
Hangzhou Bro	D-Day	6/1/15	12/31/15
Harrisburg	D-Day	6/6/15	
	GCA	11/1/14	12/31/15
	Jerusale	**10/18/14**	**10/31/16**
	JTS	9/14/15	6/30/16
	LITAOA	**7/22/15**	**7/9/16**
	PTJH	**1/24/15**	**1/9/17**
	TA	**10/8/14**	**6/30/16**
	TOTIA	10/18/14	6/30/16
Hartberg	Amazon	3/25/15	12/31/15
	CRA	3/25/15	12/31/15
	DIA	3/25/15	12/31/15
	Everest	3/25/15	12/31/15
	LivingSe	10/1/13	12/31/15
Hartford CSC	G3DNW	11/27/15	4/10/16
Hastings	FOTB	3/17/13	6/30/16
	G3DNW	2/10/15	2/14/16
	MOTUW	**6/3/14**	**12/31/15**
	PTJH	**6/1/15**	**5/31/16**
	TinyGian	9/24/15	9/30/16
	TOTIA	2/1/13	6/30/16
	WM	**7/3/15**	**7/31/16**
Houston MNS	**FOTB**	**10/4/12**	**1/31/16**
	G3DNW	2/15/14	12/31/15
	HumpbWha	3/13/15	3/12/16

Theater	Film	Open	Close
	JMCSO	5/22/15	5/22/16
	JTS	10/1/15	10/1/16
	RobotsNG	**10/2/15**	**10/1/16**
	TA	1/1/15	7/31/16
	TinyGian	1/12/15	12/31/15
	TOTIA	1/22/13	7/31/16
	WWDPP3D	1/1/15	1/1/16
Houston SCH	JTS	3/14/15	3/16/16
Huntsville USSRC	FightPil	7/1/13	7/1/16
	HidUniv	**7/2/13**	**12/31/15**
	Jerusale	1/17/15	1/16/16
	JTS	2/13/15	2/17/16
	LITAOA	**4/10/15**	**4/9/16**
	RobotsNG	**6/5/15**	**6/4/16**
Hutchinson	AirRacer	1/1/15	12/31/15
	JTS	2/20/15	2/16/16
	LastReef	10/5/12	9/30/16
	PTJH	**12/18/15**	**12/17/16**
	TOTIA	3/1/13	6/30/16
	WOTA	8/28/14	9/30/16
Indianapolis Imx	G3DNW	9/21/15	3/20/16
Jersey City	DSC	1/16/15	1/15/16
	HumpbWha	2/13/15	2/12/16
	RobotsNG	**6/5/15**	**6/4/16**
Kansas City Sci	**RobotsNG**	**6/5/15**	**6/4/16**
	TA	**9/25/15**	**5/31/16**
Kaohsiung NSTM	**RobotsNG**	**7/1/15**	**12/31/15**
Katoomba	WATE	6/1/97	
Katowice CC	**G3DNW**	**6/18/14**	**9/19/16**
Keelung NMMST	G3DNW	1/1/15	12/31/15
	TTA	1/1/15	12/31/15
Killeen	DPTP	5/12	5/16
Krakow CC	**G3DNW**	**6/18/14**	**9/19/16**
KSC 1	**JTS**	**2/27/15**	**3/6/17**
Kuwait SCK	**G3DNW**	**10/3/14**	**4/2/16**
	JMCSO	**7/17/15**	**6/15/16**
	Kenya	9/22/15	3/22/16
	MOTUW	**1/30/14**	**1/31/16**
	PTJH	**4/17/15**	**5/17/16**
	TOTIA	11/18/14	1/6/16
Las Palmas	JTS	5/30/15	5/30/16
Lehi	DSC	1/16/15	1/15/16
	JMCSO	8/7/15	4/7/16
	LITAOA	**4/10/15**	**4/9/16**
	RobotsNG	**6/5/15**	**6/4/16**
Leon Exp	**JTS**	**12/1/15**	**5/31/16**
	JTTSP	**6/1/15**	**12/31/15**
Lodz CC	**G3DNW**	**6/18/14**	**9/19/16**
London BFI	Bugs	9/1/14	1/31/16
	D-Day	5/8/15	
	JTM		1/31/16
	LITAOA	**10/16/15**	**10/15/16**
London SM	FOTB	9/6/13	1/31/16
	HidUniv	**10/18/13**	**12/31/15**
	RobotsNG	**5/23/15**	**5/22/16**
Los Angeles CSC	HumpbWha	7/3/15	7/2/16
	JTS	**10/29/15**	**9/1/16**
Louisville KSC	AirRacer	1/1/15	12/31/15
	DPTP	6/14	7/16
	FOTB	9/30/12	6/30/16
	G3DNW	6/18/15	6/17/16
	Jerusale	1/20/14	1/18/16
	JTS	**4/3/15**	**3/31/16**
	LastReef	2/8/14	6/30/16
	TOTIA	11/28/13	6/30/16
	WM	**2/8/14**	**12/31/15**
Lubbock SS	DPTP	1/14	12/15
	HumpbWha	2/13/15	2/12/16
	MOTUW	**9/18/15**	**9/17/16**
	RobotsNG	**6/19/15**	**6/18/16**
	WOTA	11/13/15	11/30/16
Lucerne	G3DNW	6/5/14	6/4/16
	Jerusale	**7/1/15**	**6/30/16**
	Kenya	1/1/15	12/31/15
	MOTN	2/3/15	12/31/15
	PTJH	**9/18/14**	**6/30/16**
	RME	10/4/12	12/31/15
	TTA	5/8/15	12/31/15
	WildCats	**11/5/15**	**11/4/16**
McMinnville	FightPil	3/23/12	7/1/16
	LITAOA	**4/10/15**	**4/9/16**
	LOF	3/23/12	6/15/16
	Rescue	6/1/12	12/31/16
	RobotsNG	**11/6/15**	**3/8/16**
Melbourne MV	JTS	3/12/15	6/30/16
	PTJH	**6/18/15**	**5/31/16**
	RME	3/26/15	3/26/16
	TinyGian	9/17/15	9/30/16
	TOTIA	6/7/13	3/31/16
Memphis Pink	FOTB	3/1/14	5/23/16
	HumpbWha	3/7/15	3/7/16
	LITAOA	**9/12/15**	**9/11/16**
	TA	3/8/14	6/30/16
	WWDPP3D	5/21/15	6/30/16
Mexicali	GCA	5/21/15	5/20/16
	GWS	6/26/15	3/31/16
	MOTUW	**11/20/15**	**5/31/16**
Mexico City Pap	G3DNW	3/27/15	3/26/16
	Kenya	11/13/15	6/1/16
Milwaukee	**DSC**	**10/6/15**	**6/30/16**
	Jerusale	**10/9/15**	**6/30/16**
	JMCSO	**6/12/15**	**12/12/15**
Mobile	**LITAOA**	**9/15/15**	**4/15/16**
Monterrey Pap	GCA	11/1/15	2/28/16
Montreal SC	JMCSO	4/3/15	12/31/15
	LITAOA	**10/30/15**	**10/29/16**
	MOTUW	**9/18/15**	**9/17/16**
	PTJH	12/22/14	12/21/15
	WildAfri	**12/18/15**	**12/31/16**
Moscow BFC	G3DNW	10/6/14	10/31/16
Nagasaki SM	**G3DNW**	**8/1/15**	**3/31/16**
New Delhi ICC	ND		
New Orleans	G3DNW	5/22/15	2/1/16
	GWS	10/6/15	6/30/16
	HumpbWha	3/6/15	3/5/16
	Jerusale	**11/19/15**	**1/19/16**
	JTS	**11/19/15**	**11/19/16**
New York AMNH	JMCSO	7/31/15	1/6/16
Niagara Can DCI	Niagara	7/1/86	
Niagara NY DCI	Niagara	5/1/07	
Norwalk MA	FOTB	5/22/15	10/7/16
	HumpbWha	2/13/15	5/12/16
Nuremberg	**G3DNW**	**10/15/14**	**5/19/16**
	HumpbWha	4/30/15	4/29/16
Omaha Zoo	G3DNW	8/1/15	6/30/16
	HumpbWha	3/15/15	2/28/16
Orlando SC	DSC	1/16/15	1/15/16
	FOTB	3/1/14	6/30/16
	G3DNW	7/5/14	1/4/16
	GreatApe	**4/3/15**	**1/31/16**
	HidUniv	6/13/14	4/2/16
	HumpbWha	2/13/15	2/12/16
	JTS	7/2/15	12/31/16
	LITAOA	**11/13/15**	**11/19/16**
	RobotsNG	**6/13/15**	**6/4/16**
Oulu	**JTS**	**11/2/15**	**5/1/16**
Paris Geo	D-Day	4/2/14	12/31/15
	HumpbWha	7/7/15	7/6/16
	JTTSP	**5/16/14**	**12/31/15**
	TTA	10/6/15	1/31/16
Parker	**DSC**	**9/26/15**	**3/25/16**
	Kenya	12/7/14	12/31/15
	TinyGian	6/28/15	1/31/16
Penrith	Rheged	7/1/00	
	SeaRex	**9/7/15**	**8/1/16**
Pensacola NAM	D-Day	10/1/14	12/31/15
	FightPil	6/8/11	7/16
	JTS	4/1/15	3/31/16
	LITAOA	**4/10/15**	**4/9/16**
	MOF	11/8/96	
Peoria RM	D-Day	5/23/15	
	Jerusale	**11/14/15**	**11/13/16**
	MOTUW	1/17/15	1/16/16
	WWDPP3D	2/1/15	5/31/16
Philadelphia FI	**Everest**	**9/15/15**	**12/31/15**
	HumpbWha	6/20/15	6/19/16
	Jerusale	1/5/15	1/1/16
	JTS	6/20/15	6/20/16
	WWDPP3D	7/1/14	12/31/15
Phoenix ASC	D-Day	5/22/15	
	TOTIA	8/20/15	8/31/16
Pittsburgh CSC	**Animalop**	**1/1/10**	
	CRA	10/1/15	7/1/16
	D-Day	5/22/15	
	FOTB	3/15/13	6/30/16
	Jerusale	**3/7/14**	**12/31/16**
	MOTN		**12/31/16**
	RME	11/26/14	11/25/16
	RobotsNG	**9/4/15**	**9/3/16**
	TOTIA	1/1/15	1/31/16
Poitiers Imax 3D	D-Day	6/6/15	1/1/16
Port of Spain	**DinoAliv**	**9/1/15**	**9/30/16**
	HumpbWha	3/12/15	3/11/16
	WTTR3D	**9/1/15**	**9/30/16**
Portland OMSI	DinoAliv	5/23/14	5/30/16
	DSC	1/16/15	1/15/16
	FOTB	1/7/15	6/30/16
	Jerusale	**11/18/13**	**11/20/16**
	JMCSO	**2/20/15**	**2/20/16**
	JTS	3/20/15	3/20/16
	WM	**10/1/15**	**3/31/16**
	WWDPP3D	8/22/14	8/31/16
Poznan CC	**G3DNW**	**6/18/14**	**9/19/16**
Prague CC	G3DNW	5/22/14	5/21/16
Puebla	JMCSO	4/23/15	4/26/16
Quebec II	DSC	1/23/15	1/15/16
Raleigh	Bugs	7/5/14	6/30/16
	D-Day	5/23/14	1/30/16
	DSC	1/16/15	1/15/16
	FOTB	10/19/12	6/30/16
	HumpbWha	3/20/15	4/23/16
	IOLM	4/4/14	
	MOTUW	**11/1/15**	**12/31/16**
	TinyGian	9/19/15	9/30/16
Regina	D-Day	11/11/15	
	HumpbWha	**11/20/15**	**11/19/16**
	TTA	5/18/15	12/31/15
Richmond SMV	GWS	3/15/14	3/15/16
	HumpbWha	3/14/15	2/12/16
Rochester MSC	LivingSe	7/1/15	6/30/16
Sacramento Imx	FOTB	8/13/13	6/30/16
	GWS	2/20/15	2/29/16
	LITAOA	**9/11/15**	**12/31/15**
Saint Augustine	DSC	1/16/15	1/15/16
	FOTB	1/18/13	12/31/15
	G3DNW	4/1/15	3/31/16
	GWS	8/9/13	9/8/16
	HidUniv	1/5/15	1/4/16
	HumpbWha	2/13/15	2/12/16
	LITAOA	**8/19/15**	**8/18/16**
Saint Félicien	TOTIA	5/1/14	5/31/16
Saint Louis SC	HumpbWha	2/13/15	2/12/16
	Jerusale	**10/4/13**	**6/3/16**
	JTS	3/13/15	3/16/16
	RME	6/1/13	
	RobotsNG	**6/5/15**	**6/4/16**
Saint Paul SMM	GWS	2/20/15	2/29/16
	HumpbWha	10/9/15	10/8/16
Salt Lake City Clark	HumpbWha	2/13/15	2/12/16
	IOLM	4/4/14	4/29/16
	Jerusale	11/20/15	12/31/15
	JTS	**5/15/15**	**5/31/16**
	LastReef	10/9/15	8/31/16
	LBC	11/20/15	12/31/15
San Antonio 2D AMC	Alamo		
San Antonio 3D AMC	FOTB	5/15/15	5/14/16
San Diego NHM	WWDPP3D	12/1/14	12/31/15
San Diego RHF	FOTB	10/12/12	9/30/16
	HumpbWha	2/13/15	2/12/16
	Jerusale	**11/20/15**	**10/31/16**
	JMCSO	**7/1/15**	**1/3/16**
	JTS	3/27/15	
	Mummies	6/1/14	12/31/15
San Jose Tech	FOTB	2/9/13	6/30/16
	HumpbWha	2/13/15	2/12/16
	Jerusale	3/27/15	6/30/16
	RME	10/1/13	
	RobotsNG	**10/3/15**	**10/2/16**
San Simeon DCI	HCBTD	8/17/96	
Seattle PSC 1	GWS	9/19/14	9/19/16
	TinyGian	9/12/15	9/12/16
	WM	5/29/15	5/28/16
Seattle PSC 2	FightPil	6/14/13	6/14/16
	G3DNW	**11/20/15**	**4/30/16**
	HumpbWha	4/27/15	5/15/16
	RME	10/14/11	
Shanghai 3D STM	**Amazon**	**8/31/15**	**8/30/16**
	GCA		**12/31/15**
	RobotsNG	**7/1/15**	**6/30/16**
	SeaRex	**1/4/15**	**3/31/16**
Shanghai Dome STM	G3DNW	12/31/14	12/30/15
Shreveport	**JTTSP**	**10/3/14**	**1/3/16**
Singapore DC	TinyGian	6/1/15	1/31/16
Singapore SC	**PTJH**	**5/30/15**	**4/30/16**
Sinsheim	**GCA**	**10/31/09**	**12/31/15**
	HumpbWha	5/21/15	5/20/16
	TTA	**5/1/15**	**12/31/15**
Sioux Falls	DPTP	4/14	12/15
	DSC	**10/2/15**	**3/31/16**
	GWS	1/30/15	6/30/16
	LastReef	1/30/15	6/30/16
	TA	4/9/14	12/31/15
	TOTIA	**6/30/15**	**6/30/16**
	WWDPP3D	9/25/15	9/30/16
Speyer Dome	**Dolphins**		**12/31/15**
	MOF	**1/1/15**	**12/31/15**
Spokane RP	**Everest**	**4/1/15**	**9/30/16**
	JTTSP	5/24/15	9/30/16
Stockholm	JTTSP	2/14/14	12/31/15
	MOTUW	**9/18/15**	**9/1/16**
Sudbury	HumpbWha	9/24/15	10/6/16
	LITAOA	**9/23/15**	**1/3/16**
	Mummies	**3/7/15**	**3/6/16**
	TOTIA	2/1/15	2/29/16
Sydney WBS	HumpbWha	4/23/15	4/2/16
Syracuse MOST	FOTB	7/4/15	7/3/16
	GCA	4/4/15	4/3/16
Taichung NMNS	FOTB	7/1/15	6/30/16
	MOTUW	**7/1/15**	**6/30/16**
Taipei AM	APE	4/1/15	4/1/16
	HidUniv	**7/1/15**	**6/30/16**
Tallahassee CLC	D-Day	6/6/15	6/30/16
	FOTB	1/18/13	6/30/16
	GWS	6/15/13	6/30/16
	HidUniv	**2/14/14**	**12/31/15**
	HumpbWha	2/20/15	2/20/16
	Jerusale	**11/15/14**	**11/27/16**
	JMCSO	8/14/15	8/14/16

Theater	Film	Open	Close
	LastReef	1/17/14	6/30/16
	RobotsNG	**10/16/15**	**10/15/16**
	TinyGian	12/12/14	12/31/15
	TTA	10/21/14	12/31/15
	WWDPP3D	4/1/15	4/30/16
Tampa MOSI	JTS	5/22/15	5/21/16
Tijuana	Dragons	7/17/15	1/16/16
	Jerusale	**4/1/15**	**3/14/16**
	MOTUW	**2/13/15**	**1/31/16**
	PTJH	**10/17/15**	**10/16/16**
Toronto OSC	HumpbWha	5/15/15	5/14/16
Valencia Spn	FOTB	7/1/15	6/30/16
	HidUniv	4/1/14	6/30/16
	MOTUW	**7/1/14**	**6/30/16**
Vancouver TWS	Bugs	3/11/06	6/30/16
	D-Day	**11/11/15**	**11/10/16**
	FOTB	6/16/13	6/30/16
	HumpbWha	10/9/15	10/8/16
Victoria DCI	**Dragons**	**5/1/15**	**5/31/16**
	FOTB	4/5/13	6/30/16
	G3DNW	9/14/15	1/21/16
	GWS	2/13/15	2/29/16
	HumpbWha	6/19/15	6/18/16
	JTS	2/13/15	2/13/16
	MOTUW	**10/9/15**	**10/8/16**
	RME	6/28/13	
	WM	**5/1/15**	**5/31/16**
Virginia Beach AMSC	DSC	1/16/15	1/15/16
	GWS	5/29/14	6/30/16
	HumpbWha	9/8/15	9/7/16
	JMCSO	6/16/15	6/13/16
	WWDPP3D	6/30/15	6/30/16
Vulcania	Vulcania	2/22/02	
Warsaw CC	**G3DNW**	**6/18/14**	**9/19/16**
Washington NASM	D-Day	5/23/14	5/2/16
	HidUniv	**1/30/14**	**12/31/15**
	Hubble3D	1/15	12/15
	JTS	3/6/15	
	LITAOA	**4/10/15**	**4/9/16**
	ToFly	7/1/76	
Washington NMNH	DinoAliv	5/15/15	5/31/16
	FOTB	10/5/12	1/13/17
	JMCSO	**3/20/15**	**3/20/17**
Yellowstone	Yell	5/1/14	12/31/16
Zion	ZionCany	7/1/08	

Key to Film Abbreviations

Film	Title	Year	Dist	
AirRacer	Air Racers 3D: Forces of Flight	2012	3D	3DED
AIWC	Adventures in Wild California	2000		MFF
Alamo	Alamo: The Price of Freedom	1988		MFF
Amazon	Amazon	1997		MFF
Animalop	Animalopolis	2008	3D	K2
APE	Antarctica's Penguin Emperors 3D	2014	3D	K2
Arabia3D	Arabia 3D	2010	3D	MFF
Bugs	Bugs!	2003	3D	SKF
CRA	Coral Reef Adventure	2003		MFF
CV	Cosmic Voyage	1996		IMAX
D-Day	D-Day: Normandy 1944	2014	3D	3DED
DIA	Dream is Alive, The	1985		IMAX
DinoAliv	Dinosaurs Alive	2007	3D	GSF
Dolphins	Dolphins	2000		MFF
DPTP	Dinosaur Passage to Pangaea	2011	3D	CGI
Dragons	Dragons: Real Myths and Unreal Creatures	2013	3D	B&D
DSC	Deepsea Challenge 3D	2015	3D	NGD
Everest	Everest	1998		MFF
FightPil	Fighter Pilot: Operation Red Flag	2004	3D	K2
FOTB	Flight of the Butterflies	2012	3D	SKF
G3DNW	Galapagos 3D: Nature's Wonderland	2014	3D	nWP
GC	Grand Canyon: The Hidden Secrets	1985		NGD
GCA	Grand Canyon Adventure: River at Risk 3D	2008	3D	MFF
GreatApe	Great Apes 3D	2014	3D	nWP
Greece	Greece: Secrets of the Past	2006		MFF
GWS	Great White Shark	2013	3D	GSF
HCBTD	Hearst Castle: Building the Dream	1996		NGD
HidUniv	Hidden Universe	2013	3D	MFF
Hubble3D	Hubble 3D	2010	3D	IMAX
HumpbWha	Humpback Whales	2015	3D	MFF
IOLM	Island of Lemurs: Madagascar	2014	3D	IMAX
Jerusale	Jerusalem	2013	3D	NGD
JIAC	Journey into Amazing Caves	2001		MFF
JMCSO	Jean-Michel Cousteau's Secret Ocean	2015	3D	3DED
JTM	Journey to Mecca	2009		SKF
JTS	Journey to Space	2015	3D	K2
JTTSP	Journey to the South Pacific	2013	3D	MFF
Kenya	Kenya 3D: Animal Kingdom	2013	3D	3DED
LastReef	Last Reef, The	2012	3D	GSF
LBC	Light Before Christmas, The	2008		CGI
LITAOA	Living in the Age of Airplanes	2015		NGD
LivingSe	Living Sea, The	1994		MFF
LOF	Legends of Flight	2010	3D	K2
MOF	Magic of Flight, The	1997		MFF
MOTN	Mystery of the Nile	2005		MFF
MOTUW	Mysteries of the Unseen World	2013	3D	NGD
MTTM	Molecules to the Max	2009	3D	SKF
Mummies	Mummies: Secrets of the Pharaohs	2007		GSF
ND	Neelkanth Darshan	2005		unk
Niagara	Niagara: Miracles, Myths, and Magic	1987		NGD
OO	Ocean Oasis	2000		GSF
Ozarks	Ozarks: Legacy and Legend	1993		IMAX
PTJH	Pandas: The Journey Home	2014	3D	NGD
Pulse	Pulse: A Stomp Odyssey	2002		GSF
RATW	Ride Around the World	2006		GSF
Rescue	Rescue 3D	2011	3D	K2
Rheged	Rheged: The Lost Kingdom	2000		unk
RME	Rocky Mountain Express	2011		SLC
RobotsNG	Robots	2015	3D	NGD
SeaRex	Sea Rex: Journey to a Prehistoric World	2010	3D	3DED
SpaceNex	Space Next 3D	2015	3D	B&D
SpacJunk	Space Junk	2012	3D	K2
TA	Tornado Alley	2011	3D	GSF
TinyGian	Tiny Giants 3D	2014	3D	GSF
ToFly	To Fly!	1976		MFF
TOTIA	Titans of the Ice Age	2013	3D	GSF
TTA	To the Arctic	2012	3D	IMAX
VanGogh	Van Gogh: Brush with Genius	2009		MFF
Vikings	Vikings	2004		GSF
Vulcania	Vulcania	2002		unk
WATE	Wild Australia: The Edge	1997		MSI
WildAfri	Wild Africa 3D	2015	3D	GSF
WildCats	Wild Cats 3D	2015	3D	nWP
WM	Watermelon Magic	2013	3D	B&D
WOTA	Wonders of the Arctic	2014	3D	GSF
WTTR3D	Waking the T-Rex: The Story of Sue 3D	2010	3D	GSF
WWDPP3D	Walking With Dinosaurs: Prehistoric Planet 3D	2014	3D	GSF
Yell	Yellowstone	1994		NGD
ZionCany	Zion Canyon	1994		K2

December 2015 Bookings Count

#	Film	#	Film	#	Film	#	Film
50	HumpbWha	7	JTTSP	2	CV	1	LBC
36	JTS	7	LastReef	2	Greece	1	LOF
35	FOTB	6	Everest	2	IOLM	1	MTTM
34	G3DNW	6	TA	2	JTM	1	ND
24	D-Day	6	TTA	2	LivingSe	1	OO
24	Jerusale	6	WOTA	2	MOF	1	Ozarks
23	LITAOA	5	Bugs	2	Mummies	1	Pulse
22	JMCSO	5	WM	2	Niagara	1	RATW
21	RobotsNG	4	CRA	2	Rescue	1	Rheged
20	MOTUW	4	DinoAliv	2	SeaRex	1	SpacJunk
17	GWS	4	DPTP	2	SpaceNex	1	ToFly
14	PTJH	4	Kenya	1	AIWC	1	VanGogh
14	TOTIA	4	MOTN	1	Alamo	1	Vikings
14	WWDPP3D	4	WildAfri	1	APE	1	Vulcania
13	DSC	3	AirRacer	1	Arabia3D	1	WATE
13	TinyGian	3	Dolphins	1	DIA	1	WildCats
12	RME	3	Dragons	1	GC	1	WTTR3D
11	HidUniv	3	JIAC	1	GreatApe	1	Yell
7	FightPil	2	Amazon	1	HCBTD	1	ZionCany
7	GCA	2	Animalop	1	Hubble3D		

Directory of Organizations Mentioned in this Issue of LF Examiner

Distributors' abbreviations are listed in **bold.**

3D Entertainment Distribution Ltd. **3DED**
Ibex House 61-65 Baker Street
Weybridge, Surrey KT13 8AH UNITED KINGDOM
Tel: +44 20-7681-2357
Fax: +44 20-7681-2357
www.3DEfilms.com

Achtel Pty. Ltd.
913 Coles Bay Road
Coles Bay, TAS 7215 AUSTRALIA
www.achtel.com

Afterglow Studios
527 Marquette Ave. #2500
Minneapolis, MN 55402 USA
www.afterglowstudios.com

AMC Metreon 16 & IMAX
101 Fourth St
San Francisco, CA 94103 USA
Tel: 415-369-6210
www.amctheatres.com/

Atlantic Productions
Brook Green House
4 Rowan Road, Hammersmith
London, W6 7DU UNITED KINGDOM
Tel: +44 20 8735 9300
Fax: +44 20 8735 9333
www.atlanticproductions.co.uk

Bad Robot
1221 Olympic Blvd
Santa Monica, CA 90404 USA
Tel: 310 664 3456
Fax: 310 664 3457
www.badrobot.com/

Barco NV
Noordlaan 5 - Industriezone
Kuurne, B-8520 BELGIUM
Tel: +32 56 36 8211
Fax: +32 56 36 8486
www.edutainment.barco.com

BBC Earth
Media Centre, 201 Wood Lane
2nd Floor, MC2C6
London, W12 7TQ UNITED KINGDOM
http://bbcearth.com/

BIG & Digital **B&D**
2900 Sunridge Heights Pkwy., #1218
Henderson, NV 89052 USA
Tel: 502-212-1559
http://biganddigital.com/

Big Films, Inc. **BFI**
1066 Boucher Crescent
Manotick, ON K4M 1B3 CANADA
Tel: 613-692-9856
Fax: 613-692-9857
www.bigfilms.ca

Blaze Digital Cinema Works
1771 Post Road East, #164
Westport, CT 06880 USA
Tel: 203-292-5745
Fax: 203-404-4998
http://blazedigitalcinema.com/

Canadian Museum of History
100 Laurier Street
Gatineau, QC K1A 0M8 CANADA
Tel: 819-776-7021
Fax: 819-776-7122
www.civilization.ca/imax/home/index_e.asp

Christie Digital Systems USA, Inc.
10550 Camden Drive
Cypress, CA 90630 USA
Tel: 714-236-8610
Fax: 714-229-7128
www.christiedigital.com

Cincinnati Museum Center
1301 Western Avenue
Cincinnati, OH 45203-1127 USA
Tel: 513-287-7014
Fax: 513-287-7079
www.cincymuseum.org

Cinema Group, Inc. **CGI**
464 S. Ranch Drive
Alpine, UT 84004 USA
Tel: 801-772-0860

CJ Entertainment
602 Building, 2nd Floor
Shinsa-dong, Kangnam-gu
Seoul, 135-893 SOUTH KOREA

Colossus Productions
Brook Green House
4 Rowan Road, Hammersmith
London, W6 7DU UNITED KINGDOM
Tel: +44 20 8735 9300
www.colossusproductions.co.uk/

Columbia Pictures **COL**
10202 W. Washington Blvd.
Culver City, CA 90232 USA
www.sonypictures.com/

COSI Columbus
333 West Broad Street
Columbus, OH 43215 USA
Tel: 614-228-2674
Fax: 614-228-6363
www.cosi.org

Cross Media International
440 California Avenue, Building Two
San Francisco, CA 94130 USA
Tel: 415-869-8664
www.crossmediainternational.com/

December Media
Level 1, 462 City Rd
South Melbourne, Victoria 3205 AUSTRALIA
Tel: +61-3-9699 8911
Fax: +61-3-9699-8611
www.decembermedia.com.au

Denver Museum of Nature and Science
2001 Colorado Boulevard
Denver, CO 80205-5732 USA
Tel: 303-322-7009
Fax: 303-370-6044
www.dmns.org/

Ecocine Verdon **EV**
Avenue Pierre Brossolette
Gréoux-les-Bains, 04800 FRANCE
Tel: +44 04 92 79 82 18
http://ecocine.fr/

Euromax
PO Box 61667
Hague, NL-2506 JK NETHERLANDS
Tel: +31-70-4168216
Fax: +31-70-3524280
www.euromax.org

Evans & Sutherland
770 Komas Drive
Salt Lake City, UT 84108-1229 USA
Tel: 801-588-1000
Fax: 801-588-4500
www.es.com

Foxfire Interactive Corporation
500 East Washington St, Suite 30
North Attleboro, MA 02760 USA
Tel: 508-699-6650
Fax: 508-699-6651
www.foxfireinteractive.com

Futuroscope
BP 2000
Jaunay-Clan, 86130 FRANCE
Tel: +33-5-49 49 30 00
Fax: +33-5-49 49 30 30
www.futuroscope.fr

Giant Screen Cinema Association
624 Holly Springs Road Suite 243
Holly Springs, NC 27540 USA
Tel: 919-346-1123
www.giantscreencinema.com

Giant Screen Films **GSF**
990 Grove St., Suite 200
Evanston, IL 60201 USA
Tel: 847-475-9140
Fax: 847-475-9145
www.gsfilms.com

Helifilms, Ltd. **HFL**
PO Box 23498, Docklands
Melbourne, VIC 8012 AUSTRALIA
Tel: +61 3 9645 2394
Fax: +61 3 9646 5446
www.helifilms.com/

Imax Corporation **IMAX**
2525 Speakman Drive
Mississauga, ON L5K 1B1 CANADA
Tel: 905-403-6500
Fax: 905-403-6450
www.imax.com

IMAX Theatre Darling Harbour
31 Wheat Road
Darling Harbour
Sydney, NSW 2000 AUSTRALIA
Tel: +61-2-9219 0300
Fax: +61-2-9211 5166
www.imax.com.au

IMAX Victoria In the Royal BC Museum
675 Belleville Street
Victoria, BC V8W 1A1 CANADA
Tel: 250-953-4629
Fax: 250-480-4830
www.imaxvictoria.com

IMERSA
, USA
www.imersa.org

Joey Shanks Productions
311 Damascus Church Rd.
Chapel Hill, NC 27516 USA
www.moviemagicnow.com/

K2 Communications **K2**
880 Apollo Street, Suite 239
El Segundo, CA 90245 USA
Tel: 310-524-9100
Fax: 310-524-1540
www.k2communications.com/

La Geode
26 avenue Corentin Cariou
Paris, 75019 FRANCE
Tel: +33-1-4005-7904
Fax: +33-l-4005-7906
www.lageode.fr

Laser Illuminated Projection Association
3081 Zanker Road
San Jose, CA 95134 USA
Tel: 408-577-1300
Fax: 408-577-1301
www.lipainfo.org

Lionsgate **LG**
2700 Colorado Ave., Suite 200
Santa Monica, CA 90404 USA
Tel: 310-255-3700
Fax: 310-255-3870
www.lionsgate.com

LucasFilm Ltd.
PO Box 2009
San Rafael, CA 94912 USA
Tel: 415-662-1800
Fax: 415-662-2437
www.lucasfilm.com

MacGillivray Freeman Films, Inc. **MFF**
PO Box 205
Laguna Beach, CA 92652 USA
Tel: 949-494-1055
Fax: 949-494-2079
www.macfreefilms.com

Marbles Kids Museum
201 E. Hargett Street
Raleigh, NC 27601 USA
Tel: 919-834-4040
Fax: 919-834-3516
www.marbleskidsmuseum.org/

Master's Digital, Inc.
8867 Forest Park Dr
Saanichton, BC V8L 5A7 CANADA
Tel: 250-412-2629
www.mastersdigital.com/

Metro-Goldwyn-Mayer **MGM**
245 N Beverly Dr
Beverly Hills, CA 90210 USA
Tel: 310 449 3000
www.mgm.com/

Montreal Science Centre
333, rue de la Commune St. W.
Montreal, QC H2Y 4B2 CANADA
Tel: 514-283-0548
Fax: 514-283-1827
www.montrealsciencecentre.com

Museum of Science and Industry
5700 S. Lake Shore Drive
Chicago, IL 60637 USA
Tel: 773-684-1414
Fax: 773-684-5678
www.msichicago.org

N3D Land Films
10 place du theatre
Sevres, 92310 FRANCE
Tel: + 33-6 88 88 87 78
www.n3dland.com/

National Air and Space Museum
6th& Independence Ave. SW
Washington, DC 20560 USA
Tel: 202-357-1675
Fax: 202-357-1652
www.nasm.si.edu/

National Geographic Studios
1145 17th Street, NW
Washington, DC 20036 USA
Tel: 202-857-7665
Fax: 202-775-6517
http://movies.nationalgeographic.com/movies/

National Geographic Studios Distribution **NGD**
161 6th Avenue, 15th Floor
New York, NY 10013 USA
Tel: 212-224-8468
Fax: 212-741-0374
http://movies.nationalgeographic.com/movies/

No Final Frontier Productions, LLC
Fairfax, VA USA
www.lightspeedpioneers.com/

nWave Pictures
282 Rue Des Allies
Brussels, B-1190 BELGIUM
Tel: +32 2 347 63 19
Fax: +32 2 347 24 54
www.nwave.com

Omniversum
P.O. Box 30.313
Hague, 2500 GH NETHERLANDS
Tel: +31 70 307 3456
Fax: +31 70 307 3450
www.omniversum.nl

Orlando Science Center
777 East Princeton Street
Orlando, FL 32803-1250 USA
Tel: 407-514-2000
Fax: 407-514-2244
www.osc.org

Pacific Science Center
200 Second Avenue North
Seattle, WA 98109 USA
Tel: 206-443-2001
Fax: 206-443-3631
www.pacsci.org

Papalote Museo del Nino
Av. Constituyentes 268, Col. Daniel Garza
Mexico City, DF 11111 MEXICO
Tel: +52-55-5237-1700
Fax: +52-55-5237-1770
www.papalote.org.mx

Paramount Pictures Corporation **PPC**
5555 Melrose Avenue
Hollywood, CA 90038-3197 USA
Tel: 323-956-5000
www.paramount.com

Directory, cont'd

Primesco Communications, Inc. **PCI**
4342 Sherbrooke West
Montreal, QC H3Z 1E3 CANADA
Tel: 514-874-9551
Fax: 514-874-9068
www.primesco.com/medias/unf.htm

RealD
100 North Crescent Drive, Suite 200
Beverly Hills, CA 90210 USA
Tel: 310-385-4000
Fax: 310-385-4001
www.reald.com

RED Studios
846 N. Cahuenga Blvd.
Los Angeles, CA 900387 USA
Tel: 323-463-0808
www.red.com

Reuben H. Fleet Science Center
1875 El Prado
PO Box 33303
San Diego, CA 92101 USA
Tel: 619-238-1233
Fax: 619-685-5771
www.rhfleet.org

Rough Cut Pictures, Ltd.
London, UNITED KINGDOM
http://roughcutpictures.co.uk/

Saint Louis Science Center
5050 Oakland Ave
Saint Louis, MO 63110 USA
Tel: 314-289-4400
Fax: 314-289-4420
www.slsc.org

Sassoon Film Design
350 Sunset Ave., #1
Venice, CA 90291 USA
Tel: 310-664-9115
Fax: 310-664-9118
www.sassoonfilmdesign.com/

Science North **SN**
100 Ramsey Lake Rd.
Sudbury, ON P3E 5S9 CANADA
Tel: 705-522-3701
Fax: 705-522-4954
www.sciencenorth.ca

SK Films, Inc. **SKF**
Pinewood Toronto Studios
225 Commissioners Street, Suite 303
Toronto, ON M4M 0A1 CANADA
Tel: 416-367-0440
Fax: 647-837-3350
www.skfilms.ca

Society of Motion Picture and Television Engineers
595 W. Hartsdale Ave.
White Plains, NY 10607-1824 USA
Tel: 914-761-1100
Fax: 914-761-3115
www.smpte.org

Sony Pictures Entertainment **SPE**
10202 West Washington Blvd
Culver City, CA 90232-3195 USA
Tel: 310-244-4000

Stephen Low Company
795 Carson Ave, Suite 6
Dorval, QC H9S 1L7 CANADA
Tel: 514-633-6036
Fax: 514-633-6035
www.stephenlow.com

Stephen Low Distribution, Inc.
795 Carson Ave, Suite 6
Dorval, QC H9S 1L7 CANADA
Tel: 514-633-6036
Fax: 514-633-6035
www.stephenlow.com

SV2 Studios
4836-D Tower Road
Greensboro, NC 27410 USA
Tel: 336-202-4777
www.sv2studios.com/

Tech Museum of Innovation
201 South Market Street
San Jose, CA 95113-2008 USA
Tel: 408-294-8324
Fax: 408-279-7167
www.thetech.org

Telus Spark
220 St. George's Drive NE
Calgary, AB T2E 5T2 CANADA
Tel: 403-221-3700
Fax: 403-237-0186
www.sparkscience.ca/

Telus World of Science Edmonton
11211-142nd Street
Edmonton, AB T5M 4A1 CANADA
Tel: 780-452-9100
Fax: 780-455-5882
www.edmontonscience.com

Tennessee Aquarium
201 Chestnut Street
Chattanooga, TN 37401 USA
Tel: 423-266-4629
Fax: 423-267-3561
www.tennis.org

TEQ4
20 Boulevard House
32 Regent Street
Brighton, BN1 1UU UNITED KINGDOM
Tel: +44 1273 667 997
http://uk.linkedin.com/in/martinteq4/

THINK Creative
2900 M Street, NW
Washington, DC 20007 USA
Tel: 202-251-9544
www.think-creative.biz

Twentieth Century Fox **FOX**
10201 W. Pico Blvd.
Los Angeles, CA 90035 USA
Tel: 310-369-3423
www.foxmovies.com

Tycho Brahe Planetarium
Gl. Kongevej 10
Copenhagen, DK-1610 DENMARK
Tel: +45-3314-4888
Fax: +45-3314-2888
www.tycho.dk

Universal Pictures **UP**
100 Universal City Plaza
Universal City, CA 91608 USA
Tel: 818-777-1000
Fax: 818-622-0407
www.universalstudios.com

Walt Disney Studios Motion Pictures **WDPD**
350 S. Buena Vista Street
Burbank, CA 91521-1232 USA
Tel: 818-560-6200
www.disney.go.com

Warner Bros. **WB**
4000 Warner Blvd.
Burbank, CA 91522 USA
Tel: 818-954-6000
www2.warnerbros.com

Weinstein Company
375 Greenwich St 3rd Floor
New York, NY 10013 USA
Tel: 212 941 3800
Fax: 212 941 3949
http://weinsteinco.com

XpanD
RR1, 225 Almaguin Drive
Sprucedale, ON P0A 1Y0 CANADA
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Fax: 705-685-1197
www.xpandcinema.com/

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- Contract negotiations
- Budgeting and purchasing
- Payroll
- Staff recruiting/supervision and training
- Development

Additionally, I have produced and directed 4D films, worked extensively as a production manager and tour manager for live theater and concerts, and crewed as a grip, rigger, and electrician on Hollywood feature films.

Throughout my career I have built a solid reputation as an honest, trustworthy, and reliable worker who can handle any task with proficiency and professionalism.

I am a member of GSCA, AAM, and IATSE. I have also served several years on the GSCA Technical Committee and as Technical Supervisor for the GSCA conferences.

I speak fluent Dutch, passable German, conversational Spanish and can read some French. I have a valid passport ready to go and am willing to travel as required, up to 100%.

Resume and glowing references available. Let me know how I can help you.

Contact John Lewis – JohnLewisProductions@gmail.com, (512) 775-4960.

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SHORTS

GSCA's new board members

The **Giant Screen Cinema Association** has announced the winners of the recent election to the board of directors. They are:

Representing commercial theaters: **Paul Wild, IMAX Victoria in the Royal BC Museum**.

Representing institutional theaters: **Michele Canto, Canadian Museum of History; Diane Carlson, Pacific Science Center; Andy Zakrajsek, COSI Columbus**.

Representing distributors: **Bob Harman, MacGillivray Freeman Films; Derek Threinen, Giant Screen Films/D3D Cinema**.

Representing Production: **Shaun MacGillivray,** MacGillivray Freeman Films, **Pascal Vuong, N3D Land Productions**.

Representing manufacturers, suppliers, and other related businesses: **Bryan Boehme, Christie Digital; Michael Daut, Evans and Sutherland; Martin Howe, TEQ4**.

Peter Bak-Larsen, Tycho Brahe Planetarium, will join the board as an ex officio director designated by **Euromax**.

They will start their two-year terms on Jan. 1, 2016, joining ten other board members who have a year left in their terms. The following board members complete their terms at the end of 2015: **Tim Hazlehurst, Marbles Kids Museum; Laurent Dondey, La Geode; Lisa Truitt, THINK Creative**.

Star Wars: $6.5M IMAX pre-sales

Tickets for ***Star Wars: The Force Awakens*** went on sale on Oct. 20 and broke several records for advance sales almost immediately. Movie site Fandango.com sold eight times more *Star Wars* tickets within the first 24 hours than it did for the previous record holder, ***The Hunger Games*** (2012). Fandango and other sites experienced outages at some points in the first few hours.

North American IMAX theaters sold $6.5 million worth of tickets on the first day, another record. No other DMR film has sold more than $1 million in a 24-hour period.

The film opens on Dec. 18 on approximately 390 IMAX screens in North America, including all of the currently installed IMAX laser theaters. Twelve U.S. IMAX theaters will show 15/70 film prints (in 2D), none of which are in multiplexes. Eight are dome theaters (indicated below with asterisks).

Star Wars: The Force Awakens *opens this month.*

Walt Disney Studios

McWane Center, Birmingham, AL*
U.S. Space and Rocket Center, Huntsville, AL*
The Tech Museum, San Jose, CA*
Museum of Discovery and Science, Ft. Lauderdale, FL
Museum of Science and Industry, Tampa, FL*
Indiana State Museum, Indianapolis, IN
Science Center of Iowa, Des Moines, IA*
Branson's IMAX Entertainment Complex, MO
St. Louis Science Center, St. Louis, MO*
The Franklin Institute, Philadelphia, PA*
National Air and Space Museum, Washington, DC
Fort Worth Museum of Science and History, TX*

The following international theaters will screen 15/70 prints:

Saskatchewan Science Centre, Regina, Canada
IMAX Darling Harbour, Sydney, Australia
Science Museum, London, UK

The Force Awakens is the seventh film in the *Star Wars* saga. Set 30 years after *Return of the Jedi* (1983), the film was directed by **J.J. Abrams** and stars **Harrison Ford, Mark Hamill,** and **Carrie Fisher** from the original cast, and newcomers **Daisy Ridley, John Boyega, Adam Driver, Oscar Isaac,** and **Simon Pegg**.

IMERSA Summit: March 16–20

IMERSA, the association of immersive media entertainment, research, science, and arts, will hold its annual summit in Denver, CO, March 16–20, 2016. The conference will feature full-dome screenings, panel discussions, workshops, and an awards ceremony. The **Denver Museum of Nature and Science** is once again hosting. (The meeting is one week after the **Giant Screen Cinema Association**'s Film Expo and Filmmakers' Symposium in Los Angeles.)

For more information and to register, visit imersa.org.

Hateful Eight is longer in 70mm

The Hateful Eight, a new western shot by **Quentin Tarantino** on 70mm film, will have an exclusive, one-week run in 70mm in about 50 North American theaters starting on Jan. 8, 2016, before its wide opening in digital theaters. Tarantino has created a special edition for the 70mm version, with about six minutes of additional footage and slightly different edits to better use the format. The 70mm cut runs just over three hours, including an intermission.

The distributor, the **Weinstein Company**, has said the 70mm edition will run in about 100 theaters in the U.S. However, rumors have emerged of difficulty in ob-

*(see **SHORTS** on page 16)*